WPI transformations

SPRING 2011

A JOURNAL OF PEOPLE AND CHANGE

A giant on the world stage, China has become a major player and partner in political, educational, and business endeavors.

contents

DEPARTMENTS

2 **Starting Point**

3 **Letters**

4 **Internationalism at WPI**
A message from President Berkey.

5 **Campus Buzz**
Research heats up the streets; students go to Guatemala; women's place ranked high at WPI.

8 **Inside WPI**
A first for WPI: three new academic deans arrived this year to help lead the campus forward.

10 **Explorations**
Learn to play the guitar like a rock star, courtesy of student-designed software.

34 **Class Notes**

46 **Obituaries**

52 **Time Capsule**
There's a new kid in town.

FEATURES

12 **Collaborations and Community**
A Q&A with President Berkey on WPI's relationship with China.

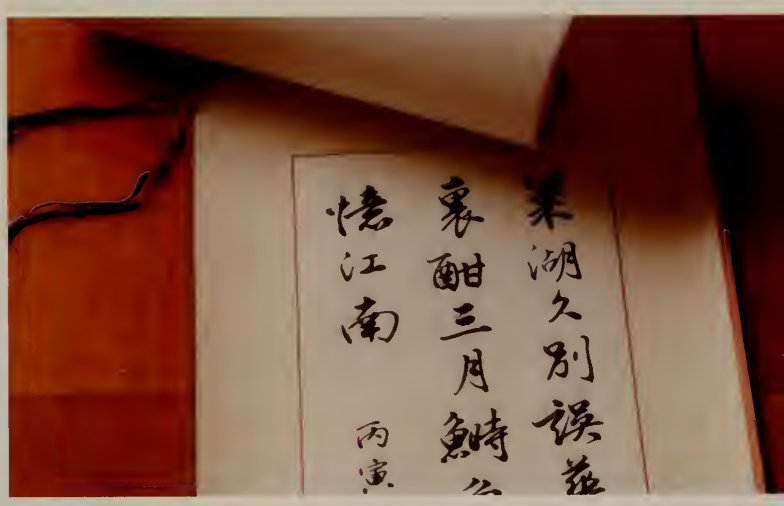
16 **China's Building Boom**
Explosive growth in China's built environment is causing a concomitant rise in fire safety considerations.

20 **Made in China**
Alumni who have worked in China talk about the promise, the trade-offs, and the future.

22 **Looking Back to Look Forward**
Historian Jennifer Rudolph's research demonstrates that Chinese modernity continues to baffle those who view it solely in Western terms.

28 **Uncensored**
China is opening up to the electronic age, but its *own* electronic age. Google, Facebook, and other Western networking sites are banned.

30 **Culture Shock**
Chinese students on the WPI campus talk about the joys and the confusions of trying to understand and live an American life.



Opposite: The statue of Zheng Chenggong, perched on Gulongyu Islond off Chino's southeost coost, represents Chino's claim to Toiwon (see "The Zelig of Toiwan," page 27).

Cover: Photograph by Patrick O'Connor.

"'Begin at the beginning,' the King said gravely 'and go on till you come to the end; then stop.'"

—Lewis Carroll, *Alice in Wonderland*

In my mind, there are scientists and engineers, teachers, doctors, and humanitarians. There are inventors and entrepreneurs. (There are *many*, many inventors and entrepreneurs.) There are CEOs, presidents, and vice presidents. There are environmentalists. There are gamers. An architect, a pastor, a city councilor, and an alpaca farmer.

Actually, there are precisely two alpaca farmers.

Who, you may ask, are these people? They are WPI. More specifically, they are some of the stories that have occupied the pages of this magazine over the last five and a half years. And they are the people I think about more often than you'd imagine.

Since 2005, when I became editor of *Transformations*, WPI alumni have continued to surprise and impress me. And, in fact, my hope for every issue of this magazine has been that these stories would surprise and impress you, too. In all of these stories and all of these alumni, I continue to be struck by how fabulous and necessary it is that a university rooted in science and engineering would produce such a wide diversity of alumni whose work is both interesting and important.

Certainly this magazine, which centers on China, is no different. You have only to look through these pages to see the wide variety of WPI alumni—and faculty and students—whose work and interests are linked to the growing superpower.

By the time this issue of *Transformations* lands in your mailbox, I will have left WPI for another opportunity at another university. It is a bittersweet moment, as I have so enjoyed, perhaps more than I can express here, being editor of this magazine since 2005. In the issues since then, on this very page, I have regaled stories of my own family—my husband, my parents, my late Bubbe, and my now-86-year-old Zaide. And so in keeping with that same unofficial tradition, I'll share one of my favorite stories about my sister, Lany.

Several years ago, Lany, then in her 20s, had the opportunity to meet Al Gore at a book signing for *An Inconvenient Truth*. She turned to him and, without the least bit of irony or sarcasm, instructed the former vice president: "Keep on keepin' on, Sir."

To WPI, I wish you the same.

As always, thanks for reading.

Charna Mamlok Westervelt, *Editor*

WPI transformations

A JOURNAL OF PEOPLE AND CHANGE

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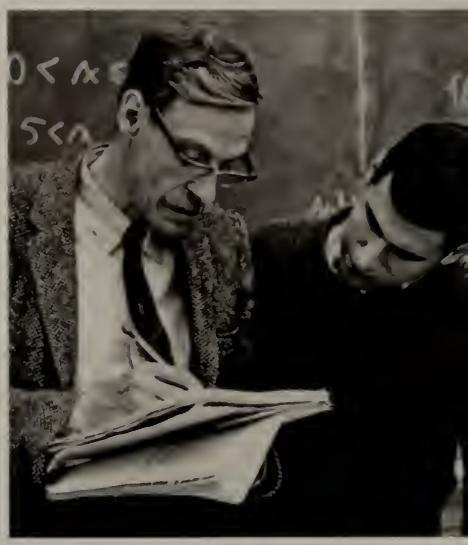


There Was Only One "van A"

With great sadness, I read in *Transformations* [Summer 2010] of the passing of mathematics professor John van Alstyne. In short, he was the best and the kindest professor who crossed my path.

I remember taking a calculus class from him and earning a grade of B. At face value that was not unusual, as I earned a B in each of four required base mathematics courses. Having been essentially a straight-A student in high school, I found college harder and my mathematics assignments and examinations to consistently be either a C or B—maybe an occasional A. But the grade of B I earned from Professor John van Alstyne was my most gratifying result in my entire time at WPI in any course.

Professor John van Alstyne had a uniquely strong, positive approach to motivating each and every student in his classroom. In his class he would demonstrate some of the homework problems on the board, all from his head, on the spot. Incredibly gifted man. More important, with each problem, he gave a physical sense, e.g., when the problem asked one to plot a given equation, he gave a meaning. In one case he said, "Imagine holding a handkerchief at each corner, then pull two opposite corners upward, and the other two downward." That is how I learned about the hyperbolic paraboloid! Decades later, I used the same analogy in teaching Theory of Shell Structures to my graduate students.

When we took written examinations in his class, Professor van Alstyne would always say, "When the bell rings, if you have no class coming just keep working and pass it in when you are satisfied you are done. If you do have a class, give me your exam papers and return to my office when your next class is over, and then continue working on it, until you are satisfied you are done." I cannot imagine anyone cruel enough to have taken advantage of his usual offer. Cheat yourself, dishonor him—never.

Before the final examination for his course, I visited Professor van Alstyne and explained my plight—always working hard, very hard; always getting a B in math. I asked for advice on how to prepare for his final exam. His advice: "Don't put so much stress on yourself. It's just part of life. It's better to relax and be rested. Instead, put aside your book and notes and just go see a movie the night before the examination." So I did. Result? I earned a final exam grade of a high A. A grade of a high A from Professor van Alstyne—from "van A"!!!

Given a present-day perspective, I sense that a professor who gave extra time on an exam might be chastised. Some students might actually use the offer to cheat. Perhaps his advising this student to skip studying for the final exam and take in a movie would be seen as inappropriate by some colleagues. I can only say, that is why there was only one "van A." The lifelong lesson is to work earnestly, "until you are satisfied you are done." That has been the essence of my career as a professor and researcher.

I am sad he is gone, but very thankful to have learned so much from him. I had many very good teachers and several very fine teachers at WPI. Professor John van Alstyne stands out as the very, very finest of them all.

Richard M. Gutkowski, PhD, PE
Emeritus Professor
Dept. of Civil and Environmental Engineering
Colorado State University

A message from President Berkey

Internationalism at WPI

Both WPI's enrollment of internotionol students ond our octivities obrood ore increosing ropidly, so it is fitting this issue of *Transformations* follows an internotionol theme. There is o speciol focus on China, now the world's second-lorgest economy, ond the setting for o recent visit by o delegotion from WPI thot Cothy ond I hod the pleasure of leoding. My interview with *Tronsformotions* about this trip is included in this issue.

More thon holf of our undergraduates complete IQP, MQP, or humonities ond orts projects ot one or more of our 26 internotionol project centers. While the project teoms working in the Africon centers in Namibia and Cope Town ore frequent winners of the President's IQP Awords, there is o special chorocteristic of the teams working in Thoilond ond in Chino. There, our WPI students are poired on the project teams with students from the host countries. I connot imogine o more intensely rewarding interculturol experience thon working shoulder to shoulder with globol teommotes on hard, importont problems in the developing world.

Elsewhere, the Venice project center hos been operating for more thon o quorter century, ond severol of the project themes, such os the impoct of modernizotion on the canals ond the preservation of public art, are well known omong the Venetions os passionote, ongoing concerns of WPI students. Indeed, the Globol Perspective Progrom hos brought an exciting ond importont dimension to the *WPI Plon* that even its founders could not hove imogined.

Here on compus our internationol students add o rich dimension of diversity to compus life, both to our ocodemic progroms ond in the leodership and culturol voriety in co-curriculor orgonizotions ond octivities. They help WPI see itself from o broodly internotionol perspective. At the some time they embroce WPI's troditions ond volues, ond go on to corry our nome ond reputotion proudly throughout the world os WPI olumni.

professionol odmissions stoff. Knowing thot their recruiter will olso be their advisor is o much-oppreciated foctor in mony students' ossessments of WPI.

Another point of emphasis wos the importonce of food to our internotionol students. Mony ore vegetorions, ond most long for the foods of their homelonds. This is why mony internotionol students prefer to live where they con cook for themselves, either on or off compus. Fortunately, ethnic food supplies are readily availoble in Worcester. As o follow-up to this conversotion we will be working with our dining services to increose internotionol components of our menus, and we will be mindful of the importonce of occess to cooking focilities in the further development of our residential facilities.

Returning to the subject of Chino, we will be seeing increosed octivities both in our project centers in Chino ond here on the WPI compus. We hove been fortunote to have hod strong leodership for the Chino Project Center complex from Professor Kevin Rong of the Deportment of Mechonicol Engineering ond Professor Amy Zeng of the School of Business. They hove importont networks of Chinese ocodemic colleogues ond ossociotes in multinationol corporotions with whom they colloborote to develop opportunities for WPI project teoms, but the logistics ond other chollenges of developing ond odministering these opportunities for WPI students connot be overstoted.

I cannot imagine a more intensely rewarding intercultural experience than working shoulder to shoulder with global teammates on hard, important problems in the developing world.

Recently I had the pleosure of hosting o group of internotionol students for lunch. We hod o wonderful conversotion obout their experiences in coming to know about WPI, deciding to enroll, and then joining our community. It requires no smoll omount of couroge to leove fomily ond friends behind for study in o foreign university, ond the conversotion helped me understand certain criticol aspects of these students' experiences.

One is the importonce of foce-to-face contoct in the recruitment process with someone who inspires confidence in the proposed experience at WPI. In our cose, we are most fortunote thot Tom Thomsen, our director of internotional students ond scholors, not only serves as o wonderful odvisor to our internotionol students on compus, but olso trovels obrood extensively to assist our excellent

Here on compus, Professor Jennifer Rudolph, o Chinese historion in our Deportment of Humonities and Arts, is working with colleogues to expond our offerings in China studies. We will soon begin offering instruction in Mondorin, for exomple, to expond our troditionol foreign longuoge offerings beyond Germon ond Sponish. (Arobic will also soon be offered.)

WPI's globol perspective is one of the most distinctive and importont ospects of our educotionol philosophy ond our ocodemic progroms, both in the genuine engogement of our project teoms in the reol culture ond problems of their host notions, and in the rich contributions of our internotionol students on our home campuses. As we say about so many aspects of WPI, there is much here to be proud of ond thonkful for.

Engineers Without Borders Address Basic Needs in Guatemala

In Guachthu'uq, a rural community in Guatemala, families prepare faod indoors over smoky wood fires. Burns and respiratary problems are comman hazards. Althaugh rainfall is quite high in the regian, access ta patable water during dry seasons is very limited.

WPI's student chapter of Engineers Without Borders sent a team ta Guachthu'uq last summer to collect preliminary data for projects to imprave the safety and efficiency af cook stoves and to ensure reliable access to clean water. The students were accompanied by their advisor, Prafessor Creighton Peet, and alumnus and mentar Matthew Gamache '99, a water resaurce engineer.

"I was tauched by the vibrancy af the cammunity and haw they welcamed us into their homes and lives," said Gamache. "I hope that we can all give our best effort aver the next four years to improve their access ta clean air and water."

Repairing Hearts, Thread by Thread

A heart attack damages heort tissue, which impairs the heorts obility to pump, which in turn puts the heart at risk for onother ottock. The heort needs to generote new, heolthy tissue after on ottock, but it locks the mechanisms to do this. One woy to occomplish this repair moy be for stem cells to be applied directly to the oreo.

Glenn Goudette's lab is focused on cardioc function, exploring woys to heal domoged heart muscle ond developing cell-bosed methods to treot cordioc orrhythmios. He ond his teom hove been working on o novel technology that a surgeon could use to deliver stem cells to torgeted oreos of the body to repoir diseosed or damaged tissue, including cardiac muscle domaged by a heort ottock.

The technique involves a suture obout on inch long, bundled with biopolymer microthreods—eoch the width of o hoir—seeded with stem cells. The teom hos shown thot adult bone morrow–derived stem cells will multiply while ottoched to the threads ond retoin their ability to differentiote and grow into other cell types.

Goudette's team is olreody ot work on the next steps in this line of reseorch—testing the stem cell–seeded microthreads in o rot model to see if they con engraft into heort tissue ond improve cordiac function.

"We're pleased with the progress of this work," says Gaudette. "This technology is developing into o potentiolly powerful system for delivering theropeutic cells right to where they ore needed, whether that's o domoged heort or other tissues."

Heat and the Street

If you've ever walked barefoot across o porking lot on o hot summer doy, you know that blocktop is exceptionolly good ot soaking up the sun's wormth. Now, o reseorch team hos found o woy to use that heot-sooking property for on olternative energy source. Professor Rajib Mollick ond his colleogues are developing o solar collector thot could turn roods and parking lots into alternative sources of electricity ond hot woter.

"Think obout it, we hove more thon three million miles of highwoys exposed to sunlight," Mollick was quoted as soying in a recent CNN story, "so if we can harness this energy, it's free, and you don't need photovoltoic solor cells."

A foculty member in the Civil and Environmentol Engineering Deportment, Mallick hos developed ond tested a prototype system thot would embed tubes filled with fluid in povement to collect heot from solar radiotion. In winter, the hot fluid could be collected ond then used to keep snow ond ice from occumuloting on roadwoys. In summer, the heot could be turned into electricity to cool buildings. Removing heot from roadwoys in worm weather or worm climotes could olso help reduce rutting, o condition thot shortens the life of roads.

"Aspholt hos a lot of odvontages os o solor collector," Mollick says. "For one, blocktop stoys hot and could continue to generate energy ofter the sun goes down, unlike troditional solor-electric cells. In addition, there is olready o mossive acreage of installed roods and porking lots thot could be retrofitted for energy generation, so there is no need to find odditional lond for solor forms."

The Doing of Dumplings

Spring festival is the biggest holiday in China. It's when children return home to be with their families and when friends ond relatives visit. For Chinese students who study abroad, this can be o lonely time of year.

So the CSA (Chinese Student Association) hosts a Spring Festivol every yeor, where Chinese students gother with their friends to celebrate Chinese New Year. This yeor, the festival was oll about moking ond eoting dumplings. Students of all nationolities sat together ot tobles in the Compus Center, talking, loughing, ond ottempting to contain a pillow of stuffing within o dumpling wrap.

Did the Americon students succeed ot moking o good dumpling? "Yes, definitely!" soid Yutong Qin. "It's o greot first experience for them, ond the dumplings don't necessorily hove to look or toste 'professionol.'"

Grammy for WPI

Many of us watched the Grammys to see what croziness Lady GaGa was up to (orrived in an egg), whether Justin Bieber would sweep the owords (thonkfully, no), or if Bob Dylon could still sing (well, yes, if you call thot singing). But the WPI chorus, which olso includes olumni ond foculty, wos interested in something else. They had been invited lost year by New Age musician Poul Winter to sing on o trock of his lotest album, "Miho: Journey to the Mountoin." The album had been nominoted os Best New Age Album. "Miho" won the Grammy thot night, ond the chorus wos jubilant.

WPI's relationship with Winter (who now hos seven Grommys under his belt) dates back 10 years, when he first invited WPI chorol director John Delorey ond his students to perform in New York City ot the Feost of St. Froncis at the Cathedrol of St. John the Divine. WPI's portication ot the festivol has become an onnuol tradition thot is eagerly onticipated by both undergraduotes ond alumni.

WPI Ranks High

- 11th best for helping women succeed
  in science, technology, engineering, and mathematics
  —*Forbes.com*
- In Top 5 Schools of Business
  providing the greatest opportunity for women
  —*The Princetan Review*
- 7th-highest starting median salary
  among engineering schools —*PayScale, Inc.*
- 9th-highest mid-career median pay
  among engineering schools —*PayScale, Inc.*
- In Top 10 for highest starting median salary
  among all colleges and universities —*PayScale, Inc.*

 By Maureen Deiana

New Deans Lead the Way

Patrick O'Connor

For the first time in its 146-year history, WPI leadership includes three academic deans whose charge is to help take the university to the next level. But whatever changes may come, the scientist, entrepreneur, and engineer who hold the inaugural deanships are steadfast in their belief that the footings on which WPI is built are to be reinforced, not reinvented.

Indeed, many defining WPI characteristics—experiential learning, interdisciplinary collaboration, use-inspired research, and a culture that equally fosters intellectual curiosity, scientific discovery, and artistic expression—were inspiration for these internationally acclaimed scholars to make WPI their academic home.

Hailing from the National Science Foundation, Karen Oates, Peterson Family Dean of Arts and Sciences, has seen just about every model for undergraduate education. "WPI is a special place," she says. "It appeals to me as a scientist that the curriculum is built true to evidence of how people learn and that it has continually evolved, particularly through the problem-based engagement of students in the community." A biochemist, Oates's love of science fuels her passions as a

Selçuk Güçeri, Dean of Engineering, Karen Oates, Dean of Arts and Sciences, and Mark Rice, Dean of the School of Business

researcher and educator. Grateful also to see beauty in everything—from a chemical experiment to an opera—she is compelled to pass on this appreciation as she works toward greater diversity of thought, ideas, and people on campus.

Oates and her fellow academic deans, Selçuk Güçeri, Bernard Gordon Dean of Engineering, and Mark Rice, Dean of the School of Business, have come to WPI seemingly at the pinnacle of their careers, each with a deep hunger to achieve more. For WPI, that means moving higher among the ranks of national research universities—a move the deans are confident will further strengthen the outstanding undergraduate experience here.

"This is a very strong and healthy institution, and I think its primary asset is that no one settles, even when things are good," says Rice, a renowned authority on innovation and global technological entrepreneurship, who joined WPI from Babson College. "There is a real sense of 'how can we make it better?' As an entrepreneur, I'm drawn to the opportunity to create something new and exciting, but I'll be building on established strengths."

This entrepreneur is also an engineer, having earned two degrees in the discipline before getting his PhD in management. So Rice had the credibility he needed when a 1940s-era alumnus called early on to ask why "my engineering school" needs a business school. It's a question Rice has fielded from students of every generation. His response is always steeped in the reality of current times and the power of this place: "The world needs engineers who know how to turn research into innovation and innovation into impact, and WPI has the approach, talent, and enduring commitment to make it happen."

Güçeri wholeheartedly agrees. He has long admired WPI for knowing when and how to adapt to maintain its position as a role model for engineering education. "Leaders must keep moving or they fall behind," he says. "You cannot be a good engineer if you cannot make products that sell. Where is the value generation, the substance?" A national leader in engineering education and research, Güçeri has come to small, collegial WPI from Drexel University, the largest engineering college among private universities, believing this to be the place where he may make his greatest contribution.

Like Rice, Güçeri has an entrepreneur's mindset and believes in teaching the practical aspects of running, creating, and growing a business—and in the thrill of invention that comes from seeing its impact. Common research interests and sponsored research opportunities are high on everyone's list of priorities. Oates is bringing faculty together around business ethics, the cross-pollination of systems dynamics, economics, and psychology. "The faculty here is a think tank for building an innovative pedagogy," says Rice. "They are coming forward with ideas for adding a dimension of entrepreneurship and innovation across disciplines."

"The world needs engineers who know how to turn research into innovation and innovation into impact."

Extending the WPI project experience toward civic engagement, locally and globally, is another purposeful direction. "This is an amazing environment for high achievers interested in foreign and civil service, law, medicine, and secondary education—especially teaching science, mathematics, and technology," says Oates.

"Know what you are looking for," Güçeri says. And he does. He is seeking "high impact" in terms of what faculty members offer, what students take away, and how society benefits. With increased research funding—private and public—the three deans will enhance the work of existing faculty and attract new talent and doctoral students whose collaborative efforts will create new knowledge.

Oates, Güçeri, and Rice are ready to roll up their sleeves and practice what they preach. What better way to lead the charge for a comprehensive university that prizes integration across the disciplines than for each to have a hand in teaching a course on leadership, creativity, innovation, and entrepreneurship? Like their doors, the class they will co-teach in fall 2011 will be open to all.

By Nancy Zerbey

So you want to be a Rock 'n' Roll Star?

STUDENTS' COMPUTER SOFTWARE MAKES A GAME OF IT

Patrick O'Connor

Not every plan hatched in a college dorm is a good idea, but this one just might be a winner. It's an electronic guitar game called Digitar that made it to the final round of the 2010 President's IQP Awards Competition.

Digitar is the brainchild of Patrick DeSantis (ECE '11), Sean Levesque (ECE '11), and James Montgomery (ECE '11), three friends who roomed together their sophomore year. Tossing around ideas for their junior-year Interactive Qualifying Project (IQP), they first thought about designing a new musical instrument. But then they bought a couple of guitars, just for fun, and made a maddening discovery: learning to play the guitar is difficult!

The students were surprised; after all, both DeSantis and Levesque had some prior musical experience (Levesque on saxophone and DeSantis with keyboards), and all three play the music video game Guitar Hero. But a guitar requires careful fingering, and the instrument has a special musical notation, called tablature, that has its own learning curve. Guitar Hero teaches neither fingering nor tablature, nor does Rock Band, the other major guitar game on the market. The gamer's "guitar," in fact, has no strings—just buttons—and requires no real fret work at all. A gamer can achieve an expert level in a guitar game and yet be unable to play so much as "Louie Louie" on a real guitar.

"We were frustrated, to be honest," DeSantis says. "We wanted to learn to play the guitar, but we wanted it to be intuitive and fun and exciting, like the game. What's so cool about games is that they are designed to be engaging, even addictive. You can be doing the same thing over and over again—for *hours*—and not tire of it because the environment is so exciting. So we asked ourselves, 'What if we could design a more guitar-like electronic interface and adapt a more game-like, animated notation that could help non-musicians learn to play the guitar?"

"We're not exactly saving lives with this project. But if we could bring more people to music, that would be a good thing."

They took the idea to Fred Bianchi, D.A., professor of music and director of computer music research, and Alex Wyglinski, Ph.D., assistant professor of electrical and computer engineering, who agreed to serve as their IQP advisors. Then they got to work.

The first challenge, and the major innovation, was to design and build a surrogate guitar, the "controller," that could record a player's real-time fret work and strumming and communicate that information directly to a computer, using the music industry's MDI protocol, which translates music into digital information. The computer would then generate the corresponding musical sounds. The team wanted the controller to be realistic, to have strings and a full set of frets, not the 6- to 10-button design of the controllers currently on the market; that way, the player could practice full fingering, which on a real guitar can produce more than 120 string-and-fret combinations. The end product, the "Digitar," would be lifelike and yet work economically in a learning-game environment.

The team's proof-of-concept instrument was as homegrown as a high school garage band. When they couldn't find a parts-guitar on Craigslist, they bought an old guitar neck, fully strung, and attached it to a guitar body they made from plywood in DeSantis's dad's woodshop. They used a unique system of sensors for the frets and the strum board, strung a tangle of wires, incorporated a Texas Instruments MSP430 microcontroller in the circuit, and secured the wiring with black grip tape. The result was surprisingly handsome—and it worked. They dubbed it "Splintar," for the splinters it threw off each time they used it.

Next came the game software. Here the challenge was to design and encode a musical notation system that players could easily grasp and master. The team felt that traditional staff and tablature notations were too daunting for non-musicians, so they patterned their notation on the animated scores found in Guitar Hero and other games. In the Digitar version, color-coded notes fall from the top of the game screen onto a graphic representation of a fretboard. When the notes reach their destination, they are played on the controller. In this way, both note value and rhythm are easily conveyed.

"This project creates a springboard for video gamers to explore the possibility of serious musical instruction within a game environment," says Bianchi. "It opens a new door, showing us that there can be multiple entry points to a life of music."

The Digitar system plays MIDI music files, millions of which are available free on the Internet, making the Digitar a very attractive learning system for the consumer market. Seeing this opportunity, the design team wrote a business plan for the Digitar system and entered it in two WPI competitions last year, taking first place in the Strage Innovation Competition and second in the Daedalus Innovation Competition. As the final round for the 2010 IQP Awards Competition loomed, and while juggling meetings with their patent advisors, the team replaced "Splintar" with a sleek, raspberry-pink guitar body.

Collaborations AND Community

President Berkey on the WPI relationship with China

Catherine Berkey

(CHINA)

中国

In October 2010, WPI President Dennis Berkey traveled to China with a delegation that included his wife, Catherine Berkey, ScD, lecturer in medicine at Harvard Medical School; Kevin Rong, PhD, professor of mechanical engineering; and Jennifer Rudolph, PhD, associate professor of humanities and arts. During their weeklong trip, the WPI group visited Beijing Jiaotong University and Tsinghua University in Beijing, Huazhong University of Science and Technology in Wuhan, Shanghai Jiaotong University, and Shanghai University.

Transformations recently sat down with President Berkey to discuss his trip, his observations, and his insights on our relationship with China.

— Charna Westervelt

美国

(UNITED STATES)

Was this your first visit to China on behalf of WPI? Why was it important to you to make this trip?

Previously I had visited our project center in Hong Kong with Professor Ed Ma, and we met with Trustee Glenn Yee '74, who was a most gracious host. Otherwise, this was my first mainland visit and Cathy's first altogether. The purpose of this trip was to strengthen WPI's relationships with five Chinese universities, and to attend the final MQP project presentations by our students who had been at our China Project Center during A-Term.

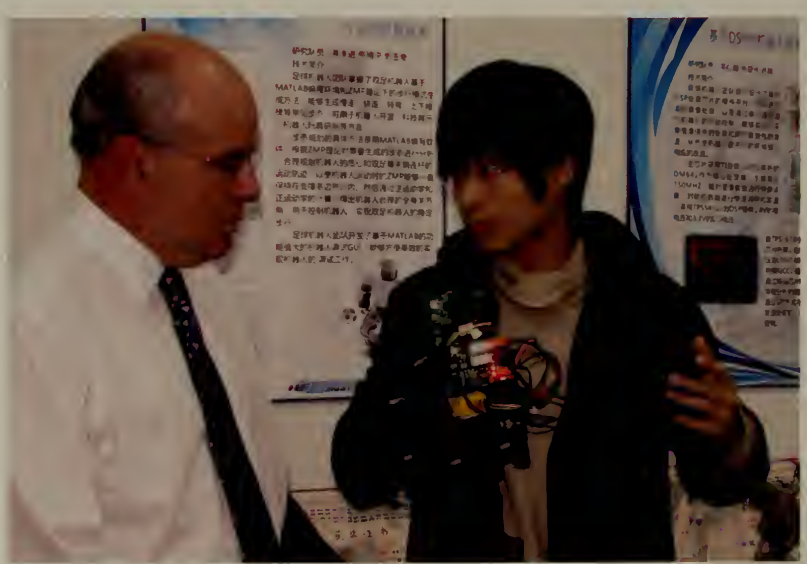
What kinds of collaborations are taking place and why is it important to maintain these ties?

Several of our faculty, including Amy Zeng in the School of Business and both Rick Sisson and Kevin Rong in the Mechanical Engineering Department, have research relationships with colleagues at these universities. They also exchange and sponsor students—both graduate and undergraduate. Amy and Kevin co-direct the China Project Center, which promotes cross-cultural collaborations between WPI and Chinese university students working together on project teams. More generally, we have agreements in place for the exchange of faculty and students, and for research collaboration.

How would you characterize the collaboration between our MQP students and their Chinese peers?

I was very proud to witness not only the excellence of the teams' work and the eloquence of their formal presentations, but also the evident bonding and mutual respect, even friendships, that had developed between the WPI students and their Chinese teammates. In my formal remarks at the well-attended colloquium where they presented their results, I noted that they had collaborated successfully not only across the Pacific but also across centuries of cultural and historical differences to advance global innovation, technological advance, and good will. The WPI students were, as they always are, wonderful ambassadors for WPI and for our nation.

"The Chinese and American students collaborated successfully not only across the Pacific but also across centuries of cultural and historical differences."



From left, President Dennis Berkey, Catherine Berkey, and Associate Professor Jennifer Rudolph.

How did the mechanical engineering programs at the universities you visited compare with labs at WPI?

We observed a high degree of engagement of the undergraduate students, including recently enrolled freshmen, with sophisticated manufacturing tools and technologies, such as computer-controlled milling and manufacturing systems. They also do early and extensive work with materials, producing scale models of structures, buildings, bridges, aircraft, etc. It is a very practical engagement with the tools and methods of production. There is a strong focus on manufacturing technologies and systems. We saw several robotics laboratories where work appeared similar to what one observes on our campus, including autonomous soccer-playing robots. We were invited to operate the simulator at the high-speed rail technology center at Beijing Jiaotong University, which was fun and most impressive. Our visits were very brief, but from what we saw, the facilities and activities were, by and large, not too much different from what one would observe in leading U.S. universities.

One difference we did note, however, was the lack of cross-disciplinary collaboration between mechanical engineering and business/management programs or the life sciences, which is unlike our approach at WPI and, certainly, at other universities in this country.

Jennifer Rudolph, an authority on Chinese history and culture, was part of the delegation that traveled with you. Did culture play a major role in this trip?

Jennifer was a wonderful companion and interpreter of the cultural and historical context for so many aspects of what we saw, including the Great Wall, the Forbidden City, Tiananmen Square, a most interesting museum in Wuhan, and everyday life in the urban centers. We stayed in the old part of Shanghai in what is called the French Concession, which was lovely, but Jennifer also hosted us for a fascinating visit to Pudong, the ultra-modern part of the city. She also took us to the city planning department of Shanghai, where there is a huge scale-model of the city done in great detail. Given China's rapid development and long history, Jennifer provided rich insights into so much of what we saw and experienced.

What was the highlight of the trip for you?

There were many highlights, as the trip was quite intense. The Great Wall and the natural beauty of China were breathtaking. The warmth with which we were received by our hosts, including faculty and students, was most impressive. Observing the rapid pace at which China is developing its infrastructure was sobering. And, of course, seeing our WPI students presenting their excellent work with such poise and grace was among the best of the highlights.

Are you planning more international visits?

I try to make one or two international trips per year for the purposes of visiting alumni and other donors, attending important international meetings, and/or visiting WPI project centers. We are often able to combine several of these agendas in a single trip. I expect that we will continue to develop new international project centers, but we do so based on interests of faculty members, usually resulting from regional interests or research relationships rather than by direction from the administration. That is as it should be, as project center leadership is very demanding of faculty time and energy.

Did this trip to China strengthen the relationships between WPI and the five engineering institutions?

We certainly believe so, judging by the interest shown in advancing these relationships. Professors Rong and Rudolph have developed a trip report that will serve as a basis for advancing these relationships, and Professor Sisson made a visit to China soon after ours, which also showed promise of expanded relationships with some of these same institutions, as well as some in Korea. Collaboration with these Asian partners holds great promise for increased opportunities for our students and faculty, and for technological and educational advance. The key will be to choose and craft those types of relationships best suited to WPI's strengths and aspirations. I am optimistic for these continuing developments. ■

China's Building

With growth and innovation comes new fire safety concerns.

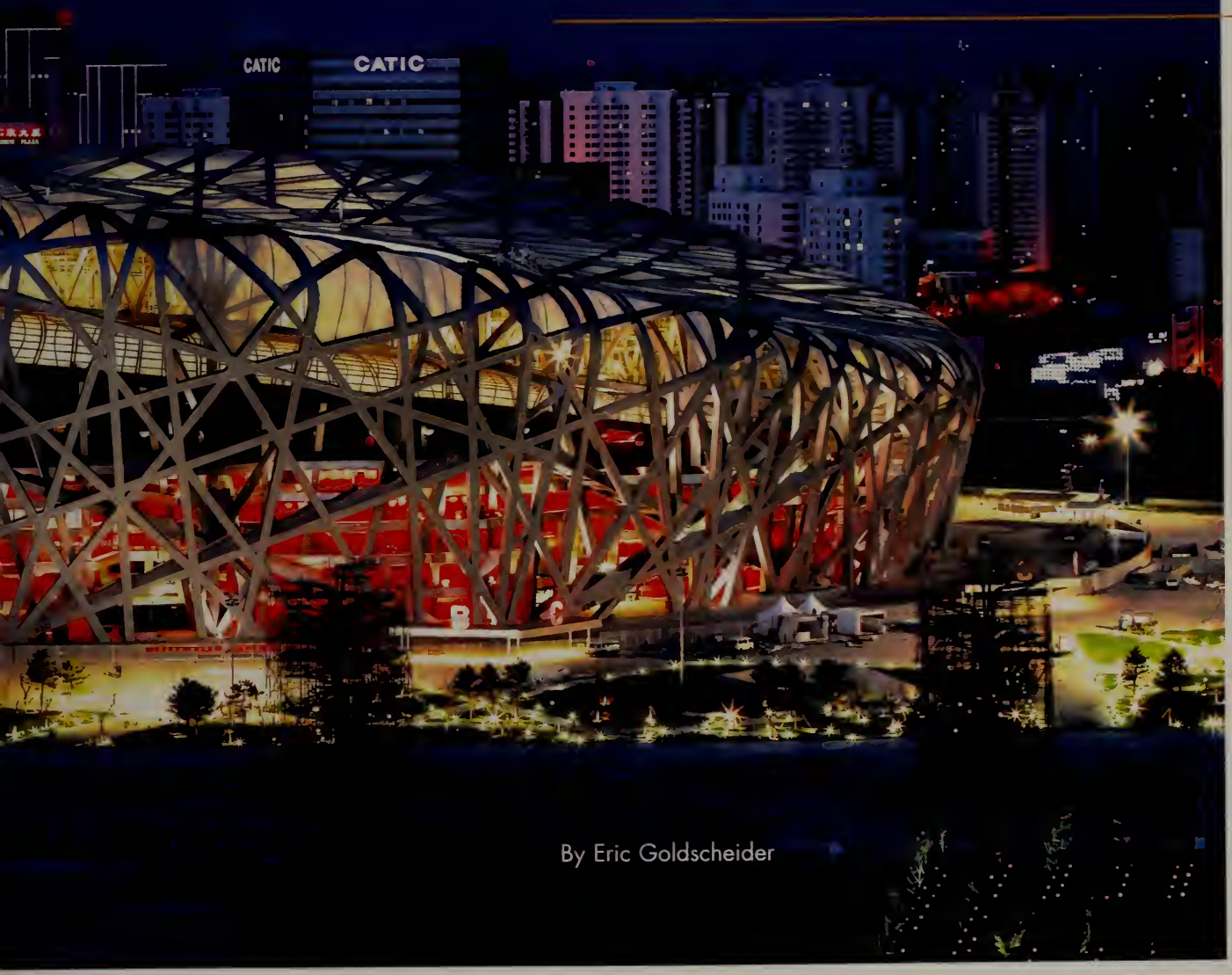
Marcel Lam Photography

Boom

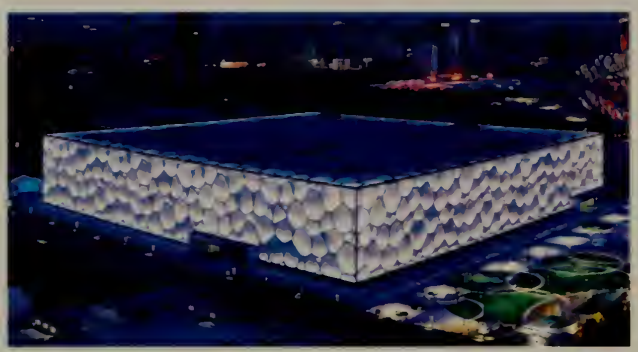
Among the most memorable images from the 2008 summer Olympics in Beijing were those of Michael Phelps winning eight gold medals.

But perhaps equally impressive to fans on the scene and to television viewers around the world was the building in which he performed these feats. The National Aquatic Center turned heads as a triumph of ingenuity and beauty.

When Kulbhushan Joshi sees that building, he doesn't think about world records or about beauty and design, but about fire. And about the extensive planning that goes into making buildings with pioneering designs safe from the threat of fire.



By Eric Goldscheider



Dubbed "The Bubble" because of its resemblance to froth, the structure (above) looks like a freestanding block of water. This arrestingly unusual space conveys uniqueness, forward thinking, and a sense of excitement about China's rising prosperity and its concomitant star turn on the world stage. Buildings like this one and the nearby National Stadium (previous page), called "The Bird's Nest" because it looks like it might have been made from twigs, are emblems of a building boom unparalleled in the history of a county that is home to nearly a fifth of the world's population. As millions of people are migrating to its cities, skylines all over China are morphing.

Joshi, a native of Mumbai, India, who is in the final stages of earning a PhD in fire protection engineering at WPI, points out that originality in form requires original thinking in how to accomplish functional objectives. "With every innovation there comes a new fire safety concern."

Brian McLaughlin '01, '02 (MS FPE) agrees that when innovative designs are in play, it is important to make sure that form and function are thought of in tandem from the start of the design process. McLaughlin, who has worked in Hong Kong, among other international sites, is currently based in the Los Angeles office of Arup, an international engineering firm that participated in the design and construction of the National Stadium and the National Aquatic Center.

The key, he said, is to consider fire protection engineering principles early on. "At the concept stage you can still make suggestions," he said. "The goal we have with an architect is to enable their designs to come to reality while still maintaining the appropriate level of safety."

In the case of the National Aquatic Center, the repetitive geometric design and the innovative outer casing posed special challenges, according to Jeff Tubbs '90, '95 (MS), another Arup engineer with knowledge of the project. Scientists developed computer models, he said, to figure out how loads would be redistributed if the heat of a fire compromised individual support features. This is an example of what is called performance-based design. When architectural elements are so innovative that existing fire codes give little guidance in evaluating construction criteria, performance-based design models not only help illustrate the behavior of structural elements in a fire, they are also used to predict smoke migration patterns and crowd responses to situations where a quick exit is of utmost importance.

Fire safety in China isn't just about figuring out how to protect innovative architectural structures. It is also about dealing with the multitude of new buildings sprouting up at an incredible rate due to the burgeoning economy.

The demand for fire protection engineers is booming in China as a result of unprecedented new construction, says Fang Li '01 (MS). Li heads the Shanghai office of Rolf Jensen and Associates, an international fire protection consultancy firm, as executive vice president of China operations.

"Everybody realizes how important fire safety is," said Li in a recent interview, "but people talking about fire protection have no idea how that applies to engineering." The field of fire protection is based on the premise that engineering principles can be applied to planning for the unexpected. Li's office of 12 people is currently serving more than 100 clients. Their projects include shopping malls, airport buildings, a train station, and a convention and exposition center in the industrial city of Suzhou, 60 miles west of Shanghai.

Performance-based design is one of the frontiers in fire safety, according to Kathy Notarianni, who heads WPI's Department of Fire Protection Engineering. This new direction in fighting fires before they occur is connected to advances in computer modeling and the ability of engineers to create algorithms to predict the path and speed of combustion and smoke, as well as human behavior in emergency situations. This development is driving a reevaluation of fire safety codes not only in the realm of innovative and original designs for enclosed spaces, such as those built for the Beijing Olympics, but also for the more common structures of everyday life.

A seminal event in the history of the field, said Notarianni, was the release in 1973 of *America Burning*, a report issued by a national commission established by the Nixon administration. A key finding was that the United States had some of the highest fire-related death rates among industrial countries even though it spent the most money per capita on fire prevention and control.

"We were blindly putting many requirements into the code that were costly," said Notarianni. Legislation around fire codes is often a response to the most recent high-profile fire. "It's a lessons-learned approach," she said, "we were sort of chasing our tail." The *America Burning* report marked the beginning of a real interest in bringing science and engineering to bear on the problem.

Performance-based design requires clearly defined objectives, such as that everyone in a building is able to get out safely in the event of a fire. With basic goals in mind researchers create computer models aimed at accurately predicting the trajectory of all possible scenarios. "The physics of fire modeling is extremely complex," said Notarianni, as is human behavior, especially when design challenges involve large numbers of people.

Much of the work being conducted in fire science laboratories at WPI strives to enhance understanding of the properties of building materials, especially new composites being developed to make innovative designs possible. The items within buildings—appliances, decorations, fuels, gasses—are also of interest.

Industry and academic laboratories are constantly generating data that can be fed into computer simulations, along with the geometry of the spaces being considered and the expected impact of fire suppression equipment.

Randall Harris has managed a laboratory in WPI's Department of Fire Protection Engineering since 2002. Under his care, tools such as a thermal gravimetric analyzer can test substances and materials at the nanogram scale to determine their melting points by plotting weight alongside very precise temperature measurements. An array of calorimeters are used to burn materials under controlled conditions. This allows researchers to collect data on everything from how long it takes a given specimen to ignite under a given set of circumstances to the special characteristics of effluents. The smoke and soot emanating from combustion is channeled through a hood into a chamber where a laser beam passes through it to measure how it affects light.

Harris also has a space in which a room-sized conflagration can be set off. "From time to time researchers need a place where they can just have a big fire and have it be safe and measurable," he said. The purposes of the larger fires are often to validate the results of the smaller burns. "If we get

Engineers create algorithms to predict the path and speed of fire and smoke as well as the behavior of people in emergency situations.

within 20 percent of what we predicted, we're doing good," said Harris. "The science is still new and we are still finding things out."

In addition to being a place for faculty and students to conduct research, the lab is rented out to industry and municipal clients for a fee. Recently, the Bay Area Rapid Transit (BART) system that connects San Francisco, Oakland, and adjoining communities used the facility to set a mock subway car aflame.

"The basic idea was to use specimens of everything in the car, from the glass windows to the electrical wires to the carpeting to the seats," explains Harris. Besides analyzing the smoke, the chamber in which the fire is set has sensors in the floors, walls, and ceilings, as well as multiple stands with equipment that not only measures heat but also the direction and velocity of airflow. A video camera captures a visual record of the fire. The goal, said Harris, "is to characterize everything that's in there and then look at that as a composite picture to find out how these things are going to react together."

These are the kinds of skills 22-year-old Yanxuan Xie is hoping to someday bring back to southwestern China and his native city of Chengdu, which is growing so quickly that he can remember seeing farmers grazing their cows in a section of the city that within half a year was transformed into a commercial center.

Xie didn't know what he wanted to specialize in when he arrived at WPI as a freshman. He credits one of his professors with alerting him to the field of fire protection engineering and to "the huge need in China" for the skills it entails. He is in his final semester of the five-year BS/MS degree program through which he also earned a bachelor's degree in civil engineering.

"This kind of engineering is different," says Xie. "Fire protection has the aspect of protecting people. It gives me the sense that it is a really noble position in which I can make a contribution, and that when I go back to China I could become a leading figure." ■

MADE IN CHINA

When President Hu Jintao made a state visit to the White House in January, an NPR commentator concluded that the momentous summit with President Barack Obama underscored China's status as "America's top economic rival."

Perhaps, but the WPI community is proving that the relationship between the two powerhouse nations is more complex and symbiotic in nature. Here are four perspectives from alumni who are benefitting from collaborations—rather than competition—with Chinese colleagues.

Daniel Boothe '05 is an acoustical engineer whose expertise is in loudspeaker design. At EAW, a division of Loud Technologies in Whitinsville, Mass., Boothe leads projects involving houses of worship, corporate AV, nightclubs, and stadiums. He has worked on site in China with contract manufacturers on initial production quality.

Pamela Giasson '05, an R&D battery assembly supervisor at A123 Systems in Watertown, Mass., spent time on site at the company's electrode coating and lithium ion battery manufacturing facilities in Shanghai and Changzhou.

Bob Falciani '68, a principal at AlfaTech in San Jose, Calif., has a particular expertise in biopharmaceutical and electronics facilities throughout the U.S., Europe, and Asia. His work in China has dealt with high-technology manufacturing, including semiconductor manufacturing, test and assembly, and data centers.

Al Barry '77 of Atlanta is an entrepreneur with consulting and manufacturing business in the U.S. and Asia. He holds five patents (one from the People's Republic of China) and is a member of the WPI Mechanical Engineering Advisory Board. He earned master's degrees in engineering and business from Georgia Institute of Technology.

BARRY'S PREDICTIONS

China will be the largest economy in the world, though many countries will have a larger middle class with far fewer people in the lower economic class. China will struggle to balance the present imbalance of wealth accumulation.

China will feel repercussions from Western nations that are not allowed to sell in the closed or protected Chinese markets. Western nations may be less likely to purchase Chinese goods or to allow Chinese firms access to their markets.

Popular perception of products coming out of China is that they are of low quality. That is certainly true some of the time, but I've been pleased to discover it is possible to make high-end loudspeakers there as well. The quality can be as high as the time one is willing to spend insisting on it, and the amount of money one is willing to spend sending engineers like me halfway around the world. —Boothe

If electrification is the **answer to a greener planet** and a more efficient way of life, China could get there first, making its economy very hard to compete with.
—Giosson

When I started, in 2001, it was easy to recruit untrained, raw labor at very low cost. The opportunity was to use this labor to manufacture and assemble products for export. The factory overhead was also much lower than in the West. The low labor and low overhead costs were somewhat offset by higher transportation costs to the Western markets. —Barry

Unless a Western firm plans to establish a true Chinese entity, the longevity is limited due to the fact the Chinese will learn fast and take it forward themselves. —Falciani

In China, the group is more important than the individual, tradition is more important than a new idea, and consensus is more important than the demands of a single person. In China, the group is accustomed to being led and to following the leader. I had to learn when to step forward and lead, without being a ruthless dictator or a wild cowboy. I continue today to read everything I can about the history, culture, politics, and economy of China. —Barry

China realizes that with its more recent economic growth it is probably the only world power that has the **"luxury" to plan its development** with all of the knowledge and experience that the last part of the last century has to offer.
—Falciani

As China's wealth increases, so does its ability to invest in its future. Over the past couple of years it has made very noticeable investments in improving transportation networks and building the newest hotels and office buildings. It has also been investing behind the scenes in an improved electrical infrastructure. China plans to install tens of nuclear power plants throughout its nation over the next 5–10 years and to build the most powerful and sophisticated electrical grid in the world. At the same time, it is investing heavily in electrifying its vehicles and reducing fossil fuel consumption. —Giasson

Eventually, **the cost of doing business in China** must rise due to its explosive growth, and the incentive to innovate will become greater. But I predict it will be a long time coming. —Boothe

With its Communist government, China is able to make decisions and implement changes very quickly, compared to most other governments around the globe. Because China can react faster, it has the opportunity to catch up over the next 15–20 years. —Giosson

Chinese firms will work hard to learn Western management and marketing techniques and seek to emulate the Japanese model of investing in foreign countries rather than exporting all products from China.

The Chinese government will have a difficult time controlling the Chinese military and national pride. More incidents will occur where China interferes with other countries, or attempts to extend its sovereign rights. The strong economy will drive expectations of a strong military and a larger role in global affairs.

The Chinese people will continue to expect more openness, more transparency, and more individual rights from their government.

Looking Back *to* Look Forward

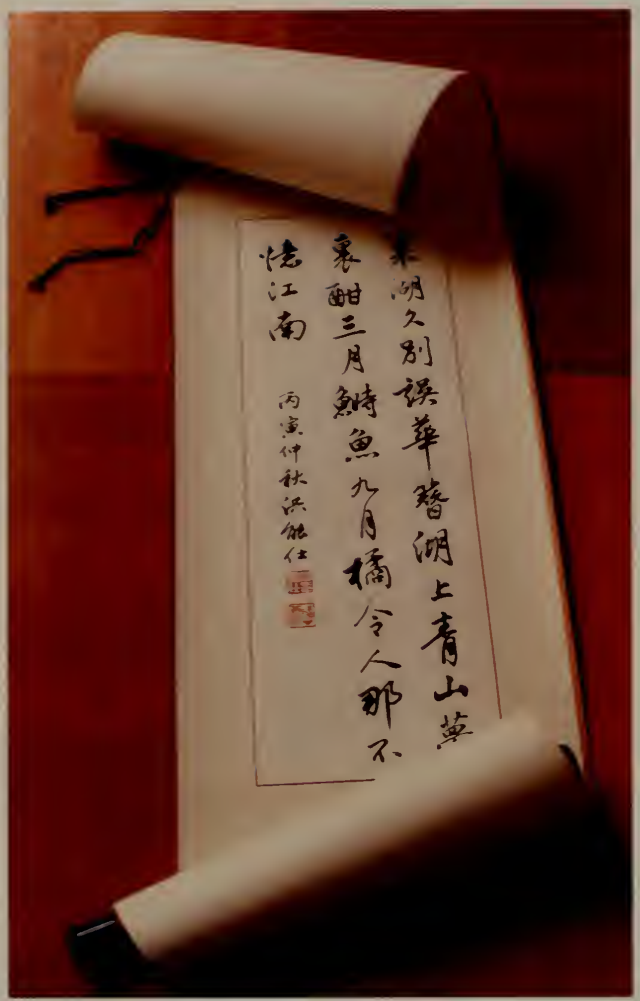
By Michael W. Dorsey

Were it not for a technicality, Jennifer Rudolph, associate professor of Asian history at WPI, might have become a doctor instead of a scholar of Chinese political history. Enrolled as a pre-med major at the University of Chicago, she signed up for a course sequence in far-Eastern civilization to fulfill a core humanities and arts requirement. She loved the courses and her professor. "He would tell us that everything good came from China," she says, laughing.

When the time came to fulfill her foreign language requirement, she opted for Chinese. But then her advisor informed her that she couldn't take both organic chemistry and Chinese. She'd have to choose—between the courses, and, more to the point, between continuing her pre-med studies and switching majors. "I dropped out of organic," she says. "I liked pre-med, but it didn't light my fire in the way the Chinese sequence had."

She earned her bachelor's degree in far Eastern languages and civilizations and was accepted into the Inter-University Program for Advanced Chinese Language Studies in Taiwan. She spent a year and a half in Taiwan becoming proficient in spoken and written Mandarin Chinese (she can also speak and read modern Japanese and read classical Chinese and Manchu). Returning to the United States, she put her language skills

Patrick O'Connor



to good use as general manager of the U.S. office of Fusion Electronics, a small joint venture that made laptops in Taiwan, and then at SEI Information Technologies, an IT consulting company. By that time she had decided to return to school. "Working at SEI was the first business experience that I found truly stimulating," she says, "but I wanted more depth, more expertise, more understanding of the world around me."

She enrolled at the University of Washington in Seattle, where she became immersed in institutional and political history. "This is the stuff between political science and history," she says. "This is how politics works and operates in contemporary contexts, but to understand that you have to have a historical basis." She turned her attention to the modern institutional and political history of China, but as she read the portraits of the modern period captured by Western scholars, she began to wonder if they'd gotten the story right.

In this popular view, China in the latter half of the 19th century was a nation in turmoil, but also a nation that kept its eyes closed. In the waning years of the Qing dynasty, which had ruled the sprawling empire since 1644, humiliating losses to foreign armies and navies and internal revolts that threatened the country's stability put the government in crisis. The world was changing all around it, but China seemed unable to adapt and modernize. Its stagnation would lead, in short order, to the downfall of the Qing dynasty and a century of upheaval.

But to Rudolph, this narrative didn't ring true. "The Chinese government was populated by people who had gone through a rigorous civil service examination," she says.

Rudolph's scholarship resulted in a book that is credited with revising our understanding of this pivotal period.

"They were really smart; they weren't unaware. They recognized Western military might, and they debated many courses of action."

She notes that much of the work done on modern Chinese history through the 1970s was written from a distance. "Many of the people who wrote these works were great scholars," she says, "but they had limited access to the original source documents and they were immersed in the paradigm of modernization theory. China had not followed the accepted modernization path; moreover, it was a Communist state and had closed off its mainland archives to outsiders."

Rudolph's graduate studies came on the heels of the normalization of relations between China and the United States and coincided with the opening of those archives to Westerners. She spent nearly two years visiting archives in Beijing and Taipei, studying the intricacies of Chinese bureaucracy in the late 19th century, a time the Chinese called the Self-Strengthening Period.

She discovered that the Zongli Yamen, the most important government organization established at that time, was far more than an ineffectual Western-style Chinese response to the country's defeat during the Opium Wars, which was how accepted scholarship portrayed it. Rather, it reflected top-level awareness of the need for innovation in governance and represented a significant and forward-looking Chinese-based effort to reassert central control in an era of decentralization.

Rudolph's scholarship resulted in a book, *Negotiated Power in Late Imperial China: The Zongli Yamen and the Politics of Reform* (Cornell East Asia Series, 2008), that is credited with revising our understanding of this pivotal period. "The Zongli Yamen is known as China's first foreign office, but it was really closer to a state council or cabinet," Rudolph says. "It was in charge of all modernization. The Qing Dynasty had the world's most mature bureaucracy; how do you add to it a government organ that is responsible for all modernization? Think about how many tentacles it had to have and how much jurisdiction and control it needed. Think Homeland Security," she adds, noting that the U.S. department created to build bridges between disparate intelligence agencies may be the best modern anaology for the Zongli Yamen.

Before the creation of the Zongli Yamen, the Chinese government consisted of many parallel hierarchies, all reporting up to the Grand Council—the only Qing office with comprehensive jurisdiction. Horizontal linkages were nonexistent between these silos. "The Zongli Yamen, because it was in charge of foreign relations, because it was in charge of mining, the post office, and all of the other operations that go along with modernization, had to have mechanisms in place that linked the parallel hierarchies of the new foreign affairs administration and the established territorial administration so that it could access necessary information," Rudolph says.

These linkages made possible the give and take that was central to the process of fostering change within a centrally controlled organization, she says. "This is a difficult process. It takes constant negotiation. Where does the power come from? You can decree it, but it ultimately has to become a de facto kind of power."

While the Zongli Yamen was short-lived and the Qing Dynasty, itself, collapsed in 1911, Rudolph says the tale of the Zongli Yamen is nevertheless a story of significance. It demonstrates that China was able to develop its own approach to innovation and change, one that ultimately helped rationalize governance and usher in a more ministerial type of rule.

Significantly, as China distances itself from a century marked by wars, civil strife, and revolution to build a modern,

innovation-driven economy, it is reexamining the structures of the Zongli Yamen. "What is interesting it that they are in some ways doing the exact same thing the Zongli Yamen did," she says. "Take, for example, the banking system in China. It is state owned and controlled, but all around it you have economic liberalization taking place. So all of a sudden, the banking system is opening up. You still have to keep control at the top, but there is an effort to establish horizontal linkages."

For Rudolph, the story of the Zongli Yaman holds an important lesson for today's government and business leaders: sometimes, to understand what is really going on in a complex and nontransparent country like China, you need to look in unexpected places. "China is evolving so quickly," she says, "and we tend to look at the top and the bottom for clues: What is the Politburo doing? Are there lots of protests by average citizens?

"But you need to look in the middle to see how the country is actually working. It's there that you'll get a real understanding of whether or not China will be stable and whether the economic reforms and the pace of reforms will be sustainable. A lot of attention is being paid to that area in China right now."

And a lot of attention is being paid to China, itself, around the world, as it emerges as a major and influential economic power. As the recent visit to Washington by Chinese president Hu Jintao made clear, "the United States and China are two giants that are going to have to share the stage, at least for the foreseeable future," Rudolph says. A great deal of uncertainty remains about how that relationship will play out, and just where the path of economic and political reform will take China in the years ahead. As the Obama Administration strains to get a clearer picture of that future with history-conscious China, Rudolph says, it doesn't hurt to take a moment to examine the past. ■

The life of Zheng Chenggong, a 17th century pirate, has served as an inspirational tale for centuries of Chinese societies and cultures Sculptures of him abound on both sides of the Strait of Taiwan. Photo by Jennifer Rudolph.

The Zelig of Taiwan

In the 1983 film *Zelig*, Woody Allen plays a human chameleon who can fit into any situation by taking on the appearance and mannerisms of those around him. One of the more remarkable stories in modern Chinese history is the Zelig-like tale of a 17th-century pirate whose life and story have been transformed again and again to fit the purposes of a string of governing powers.

The story of Zheng Chenggong, known as Koxinga in the West, is intimately intertwined with the history of Taiwan, says Jennifer Rudolph, who is working on a book about the changing sense of "place identity" on this island that lies less than 100 miles from the coast of mainland China.

Taiwan's identity is no small matter, Rudolph notes. In 1949, when the Chinese Communist Party came to power in the People's Republic of China (PRC), the losing side, the Nationalists, found safe haven on Taiwan for their regime, the Republic of China (ROC). "Ever since, there have been two Chinas," she says. "This stalemated civil war makes the international status of Taiwan complicated: is it a nation-state, or is it a province?"

The PRC claims the island as a province, but since 1949 Taiwan, as the ROC, has acted as a de facto state. The United States recognized Taiwan and the ROC as the rightful China until 1979, when it switched its recognition to the PRC. "All of this makes Taiwan's identity hotly contested," Rudolph says, "and it makes Zheng Chenggong an important figure once again."

Zheng Chenggong's father was Chinese—a merchant and pirate—and his mother, daughter of a Samurai, was Japanese. After the Manchu invaded southern China and drove out the Ming emperor, Zheng, a Ming loyalist, fought the new Qing Dynasty until forced to flee to Taiwan. There, he drove out Dutch colonists and turned the once lawless island into a thriving Ming outpost and commercial state.

Zheng ruled Taiwan until his death from malaria in 1662. His children held onto power until the 1680s, when the Qing empire conquered the island and decided that it made political and economic sense to annex it. To help strengthen ties between Taiwan and the mainland, they also co-opted the memory of Zheng, whom they'd previously viewed as a traitor and outlaw. Under the new regime, he was lionized as a Confucian god for his service as a loyal official of the Ming.

When China ceded Taiwan to Japan after the first Sino-Japanese War in 1895, Zheng's legacy was refreshed once again. Well known in Japan because of his mother and a popular 18th-century Japanese play that portrayed him as a folk hero, Zheng became a symbol of the historical connection between Japan and Taiwan. "The new colonial regime used plays and textbook passages about Zheng to spread the message of patriotism and loyalty," Rudolph says. "They painted Zheng's brand of anti-imperialism as anti-Western and used his mixed heritage and loyalty to his emperor to claim his loyalty to the Japanese emperor."

At the end of World War II, Japan withdrew from Taiwan just as China was in the midst of a civil war that ultimately resulted in the split between Communist China on the mainland and the ROC on Taiwan. The Nationalist Party on Taiwan resurrected the image of Zheng as a liberator. "It even referred to its leader, Chiang Kai-shek, as a modern-day Koxinga," Rudolph says, "who would soon retake the mainland."

Today, as Taiwan's future hangs in the balance, leaders on both sides of the Strait of Taiwan understand the value of the story of Zheng Chenggong. Those dreaming of an independent nation hail him as the Father of Taiwan who brought Chinese civilization and culture to the island; a former vice president has even referred to Zheng as Taiwan's Moses. Those hoping to unite Taiwan with the mainland portray him as a national hero who freed the island from foreign imperialists. In fact, on the island of Gulangyu in Fujian province, where Zheng planned his attack on the Dutch, the PRC has built a massive granite statue of him.

"It's the largest stone statue of a historical figure in China," Rudolph says, "including the major political figures of the 20th century, like Mao Zedong or Deng Xiaoping. The statue is indicative of the identity building that the PRC has actively engaged in during the current period: a rediscovering of history and the construction of alternative grassroots models of belonging for contested places like Taiwan."

Like the tales of many legendary figures, those of Koxinga are far more grandiose than the real story of the brutal pirate who may have killed thousands in his quest to establish his own kingdom. "But," says Rudolph, "the usefulness of Zheng Chenggong as a political icon will continue to outweigh the realities of the historical record."

By Eric Goldscheider

Uncensored Internet in China

Google Search | I'm Feeling Unlucky

Within hours of the announcement in Oslo last October that Chinese dissident Liu Xiaobo was the 2010 recipient of the Nobel Peace Prize, search engines in China stopped yielding responses for anything connected to the Nobel Prizes, according to Professor of Mechanical Engineering Yiming (Kevin) Rong. "Before the Peace Prize was announced, the Nobel Prizes were introduced for the sciences," said Rong, ticking off physics, biology, and economics. "But once the Peace Prize was announced, everything about the Nobel Prizes was cut."

The Chinese government is very sensitive about criticism and regards the awarding of the prize to the jailed literary critic who advocates for an end to one-party Communist rule in China as a slap in the face. That the government could largely succeed in cutting off an estimated 450 million Internet users from a slice of global communications immediately after one of its domestic critics was thrust into the international limelight is illustrative of the complicated relationship between the drive for economic growth in China and the free flow of information.

The desire and the ability of Chinese authorities to filter search results has been a bone of contention between the government and Google, the world's largest search engine. When Google launched its Chinese site in 2006, it faced a dilemma: the price of being granted permission to do business in China included having to agree to government censorship.

Jennifer Rudolph, associate professor of Asian history, has been observing the evolution of this relationship. Initially Google agreed to terms it found onerous because it didn't want to risk missing out on establishing itself in the world's largest Internet market. Google saw itself as a force for openness, said Rudolph, "it justified its entrance into China as

There is a complicated relationship between the drive for economic growth in China and the free flow of information.

bringing a benefit to the Chinese and that censorship was the price it had to pay."

The relationship soured in December 2009 when Google perceived that its servers were being hacked by the government, and last March Google announced that it would no longer filter search results. The company still has a presence in China, but its search portal directs users to its servers in Hong Kong, which are not subject to censorship.

Without Google, Chinese Internet users are not left to wander aimlessly in the ether. A homegrown search engine called Baidu is by far the most popular way to navigate the Internet in China. Rong, who divides his time between his post in Worcester and a job at Tsinghua University in Beijing, says that in terms of speed Baidu now surpasses Google because of the extra hurdles related to routing and service interruption that Google users must endure. That edge has enabled Baidu to increase its already dominant market share. Rong believes Baidu is less powerful than Google in terms of search results, but Baidu has a better grasp of the Chinese market and is therefore more likely to give surfers results they are looking for.

That is, unless they are looking for information tied to politically sensitive phrases such as "June 4, 1989," "Tiananmen massacre," or "Falun Gong." (The last is the name of a banned religious movement.) As significantly, says Rong, Chinese Internet users don't have access to popular social networking sites such as Facebook, Twitter, and YouTube. Again, there are Chinese equivalents of these sites. They are wildly popular, but they are on the other side of what is often referred to as "The Great Firewall" that separates Chinese Internet users from the rest of the world.

At the start of the January uprising in Egypt, the Associated Press reported that Chinese microblogging sites based on the Twitter formula yielded this message to anyone searching the word Egypt: "According to relevant laws, regulations, and policies, the search results are not shown."

Asked what he thinks would happen if Chinese authorities lifted all restrictions on Internet searches, Rong said, "It may have significant impact on government authority in the country." He doesn't hazard a guess on how long it would take for the current power structure to collapse, but he holds it unlikely that it would be a peaceful transition. Because of that, he said, as long as the government can deliver economic growth, there are significant parts of the population that support censorship as a legitimate tool for maintaining stability. He is not among them. "I've been here too long," said Rong of his many years studying and living in the United States.

The dilemma facing the Chinese government, he said, is that trends in technology make it more and more difficult to limit the free flow of information in a society that wants to participate in global economic growth. The danger is that as people find out that they have been misled about the meaning and impact of important historical events, it will unleash anger that will be hard to contain.

"I know the problem," said Rong, "but I don't know the solution." ■

By Susan Seligson

CULTURE SHOCK

From the food (hot dogs—ugh) to the social gatherings (so loud!), Chinese students try hard to understand America and its customs.

On a frigid Sunday evening in February, Yao Zheng, an electrical engineering grad student from Beijing, escorts an American acquaintance to a WPI party kicking off a week of festivities to usher in the Year of the Rabbit. The Campus Center is all but deserted and eerily silent as Yao heads up the stairs and nudges open the double doors of the Odeum. There, at least 150 Chinese students sit at round tables drinking Coke and finishing the last bites of dinner from a copious Asian buffet.

"This is a real Chinese party," says Yao, who returned to China in August. "People just stay seated." He is happy at WPI but counts just two Americans among his friends. The school's many services for Chinese students, and international students in general, range from writing assistance to ESL tutoring to off-campus shopping tours. But nothing prepared Yao for the divergent social styles of Americans and Chinese. Chinese prefer structured gatherings, communal cooking, and games to freewheeling encounters. As a pair of Chinese comedians banter before the quietly appreciative crowd, Yao speaks of a cultural gap that breeds neither animosity nor disapproval, just perpetual bemusement.

"What if you saw a girl you liked at another table—how would you approach her?" asks the visitor. "I wouldn't!" says the quick-witted, jovial Yao, who has a girlfriend in China and texts her at every opportunity. When he arrived at WPI, Yao was homesick and spent about $2,000 a month calling China. He's settled in now, but still marvels at how, both at parties and in the classroom, Americans venture boldly where Chinese fear to tread.

An annual report by the Institute of International Education reported a 30 percent rise in the number of Chinese nationals studying in the United States last year. Chinese students attending U.S. colleges now number 128,000, or 18 percent, of 691,000 international students. In 2010, according to the report, China outranked India as the leading source of foreign students in this country.

WPI embodies that trend, with Chinese students making up 48 percent of the Institute's 730 international undergraduates and graduate students, who hail from 60 countries, according to Tom Thomsen, director of international students and scholars at WPI's International House. WPI has two thriving Chinese student organizations: the Chinese Student Association, composed of students from Taiwan and Hong Kong as well as mainland China, and the Chinese Students and Scholars Association, a group of graduate students from mainland China.

"There's a national trend of colleges being inundated with applications from China," says Thomsen, whose staff helps foreign students settle in with three-day orientation workshops offering guidance with everything from the nuts and bolts of visas and permits for work and travel, to helping students cope with language barriers, dizzying academic options, and, perhaps most confounding, American ways.

"Culture shock comes in phases," explains Thomsen, whose counseling staff employs a YouTube clip from Columbia University (http://www.youtube.com/watch?v=tPfB6GIjM9Q). "At first it's all great, but after a few weeks students start

Chinese students make up 48 percent of WPI's 730 international undergraduate and graduate students.

getting depressed, and miss the comfort and environment of their home country. There's a lot to get used to, so we introduce them to the community," which includes an outing to a shopping mall and a walk-through at Worcester's Super Wal-Mart. Though it's understandable that Chinese students will cling to the familiar by sticking together at first, "we encourage them little by little to branch out and meet some American students," he says.

If only it were that easy, laments Yuliang "Kevin" Sun, a graduate student in marketing. Yuliang is one of six Chinese students living off campus who gather at the Park Avenue restaurant Pho Dakao to discuss the trials and rewards of attending college a world away from home. For starters, that ubiquitous American greeting, "How are you?" had him stumped. "I didn't know how to answer," he recalls, as he digs into a meal of steamed fish, spring rolls, and caramelized pork. "In China you always try to give a real answer. I don't know how to keep up the conversation, and I don't know what American girls are interested in. I had to make American friends to improve my speaking, and when I invite them to a party they are pleased to come," he says. "But they're not interested in our games."

Topping these is a role-playing game called "Mafia Doctor" that has captivated the youth of mainland China, says undergraduate Yunwen Sun, 20, a math major.

"Americans go to a frat house to dance, drink, and talk about partying," says Yunwen. "We sit together and play games. Our definition of party is just friends sitting together." Yuliang, who'd returned from China just a day earlier, puts it succinctly: "It's like we're boring." Most of the students are products of China's one-child law, the single aspect of Chinese culture that seems to stir endless curiosity among the students' American peers. "My mother had six sisters and two brothers, but I'm used to being alone," says Yao. "I don't mind staying alone on Saturday night. I don't have the idea that I have to go somewhere." To bring Chinese together on the scale of the New Year's gathering can be, he observes, "a tough job."

For some Chinese, a shared passion can open the door to friendships with Americans that transcend the superficial. In the last year, the upbeat Yunwen began rooming with three Americans, fellow members of the women's crew team. Beyond their common sport, the students found common ground in something beloved by all—food. Under her tutelage they turn out Chinese feasts, says Yunwen, who is dating an American. But their preferred fare, the Szechuan specialty known as the hot pot, is still a tough sell, the students say. And the notion of dessert is quite un-Chinese. Those almond cookies that turn up as the coda to every Chinese meal here? "They don't exist in China," says Yunwen. Fortune cookies are also an American invention.

As the students polish off a platter of watercress with garlic sauce, they weigh in on a staple of American culture that horrifies them—the hot dog. "And if you try to eat the sausage without the roll it's just terrible," says Yao as the rest of the students wince. "When I first ate your salad I thought it was kind of weird," says Yuliang. "The sauce is sour, and in China we don't eat a lot of raw things. But there *is* something I really like—your clam chowder."

"Americans love our food," says Yuliang. "And my American friends are very kind, but I just don't know how

From left, front raw: Chunyan Li, GS; Yunwen Sun '13; Xiaakang Yu, GS.
Back raw: Yaa Zheng, GS; Zijian Xia '13; Yuliang Sun, GS.

to keep the friendships going." All agree that one way to bridge the culture gap is through sports. Yuliang joined the tennis club. Yao was on the swim team in high school and swam every day in China as an undergraduate in Shanghai. In order to swim there, he had to make his case before the university administration. "Getting permission to swim was very official there," he explains. "So when I came here I did it the same way, going to my advisor and telling him that I'm a good student and would like to swim. He said, 'Just go put on your suit and jump in.' In America people do sports for fun," adds Yunwen. "But in China if you want to do sports, you have to be very serious."

When it comes to American spectator sports, the students are perplexed. Football? "I just don't understand it," says Yunwen. "It's kind of too physical," adds Yuliang, whose idea of a gripping contest is the U.S. Open. Baseball? Kind of boring, the Chinese students agree, though Yunwen is drawn to the grace of basketball. Yuliang's pro basketball education came when he was shouted down for wearing a Celtics shirt in Los Angeles, where he was visiting his two sisters.

The students share good-natured laughter as they chime in with random observations about American cultural quirks. All bespectacled, they wonder aloud why young Americans "barely wear glasses." "Americans will always hold the door open for you," says Yunwen, who comes from the city of Jinan in Shandong Province. "But in China there are so many people everywhere that doors are just kept open," adds Xiaokong Yu, a shy graduate student majoring in civil engineering. "When I got here everything felt so empty," she says. "Empty university, empty city." Graduate student Chunyan Li, 23, who arrived here from Zhejiang Province in August to study operation design and leadership, was startled by how few people are out walking along Worcester's roads. "In China, people are everywhere," she says.

Rampant talk of Tiger Mothers notwithstanding, the Chinese students would like to dispel the myth that they are far more disciplined in their study habits than their American counterparts. At least at WPI, "The Americans work very hard. As hard as us," says Yuliang. But Chinese tend to be early risers—not Americans' strong suit. And they generally aren't fond of alcohol, so hangovers are not an issue.

"In China all classes are in the daytime," adds Yuliang. In class, at least for the first few months and despite professors' efforts to be helpful and clear, Chinese might take all day to read a chapter that Americans consume in a few hours, says Yuliang. "My listening is not as good as my writing," adds Zijian Xia, 19, who adds that it takes time to grow accustomed to speaking out in class. "In China we ask our questions after class," says Zijian, a chemistry major who calls himself Donnie. Their professors are patient and helpful, add the students, and some, like Yuliang, get help from student volunteers at the writing center.

"The professors know what they're doing," says Yao. "They put you on the edge but they don't push you off the cliff," he adds, comparing graduate school to "slavery." But he grins when he says it, and the students say they find more hands-on opportunities here than in China, particularly in the lab. "Students are more equal to professors in the lab here," says Xiaokong, who is working toward a doctorate. "As a freshman I work in the biochemistry lab," says Zijian. "In China, that's impossible."

While subtle cultural differences exist among the students, who come from different regions of their vast homeland, there is one obsession they inevitably share: how to call China, cheaply and often. From international calling cards to Skype, they are forever tweaking the formula after being nearly bankrupted that first difficult month far away from home. "I Skype three to four times a week now, but in the beginning I called my mother every day," says Chunyan, who plans a visit home in May.

Yao tells a story of seeing a new arrival from China, a male graduate student, who felt so overwhelmed by the transition that he broke down sobbing. That was extremely unusual, says Yao. For his part, and for the students gathered this brisk evening, there are no regrets. "We're having fun," says Yunwen. "And we all are confident we can do this." ■

Chinese prefer structured gatherings, communal cooking, and games to freewheeling encounters.

Stay connected. Materiol for Class Nates comes from newspoper ond mogozine clippings, press releoses, and informatian supplied by alumni. Production schedules vory; please allow up ta 6 manths for your note to oppeor in print. We welcome your news by Web: **wpi.edu/+Transformations** Emoil: **alumni-editor@wpi.edu** Fax: **508-831-5820** Moil: **Alumni Editor, Transformations, WPI, 100 Institute Road, Worcester, MA 01609-2280**.

Irving Gerber '44, owner of Fine Woodworkers af Bastan, has retired. He ond his wife, Shirley, celebrated their 65th wedding anniversory lost yeor.

The family histary of **Kim Woodbury '44** wos an display at Gordon Library, in on exhibit called "120 Yeors of Fine Printing: The Story of Woodbury ond Compony." Kim wos interviewed obout the compony's founding ond the mony generotions of Woodburys ot WPI. (See the video ot wpi.edu/+library). The WPI community mourned the deoth of Kim's wife, Betty, wha died Oct. 19, 2010.

Daniel Lacedonia '46, a 50-year resident of Eost Longmeadow, Moss., wos chosen os grond morshol for the town's 2010 Fourth of July porode.

Albert Soloway '48 offered a histarical perspective on the chemistry curriculum ot the U.S. Novol Acodemy in a letter ta *Chemical & Engineering News*. At the height of Warld War II, Solowoy ploced second in the "plebe chemistry" closs of 900, due to his superior chemistry bockground. With no other chemistry courses ovoiloble ot the ocodemy, he elected to return to WPI to complete his BS degree.

Michael Hoechstetter '53 teaches chemistry ot Columbus Stote Community College in Ohio, where he has been an odjunct instructor for six years.

Philip Simon '53 ond his wife, Pot, live in Vista, Calif. He retired from IBM ofter 35 yeors, and spent 17 years as a profes-sor of engineering ond camputer science ot Notionol University in Son Diego.

William Hills '54 blogs on tapics from the BP oil spill to income toxes and immigratian ot Op.EdNews.com. He is the retired president and faunder of Hills R&D Inc.

Walter Kirk '54 writes from West Polm Beach, Fla., "I am safely inta my 87th year ond all is well."

Milton Meckler '54 hos published several papers in collaborotion with the University af Chicaga and the Sustainable IT Ecasystems Lab at Hewlett-Packard Loboratories. His compony, Design Build Systems (DBS), is commerciolizing components for o vopor recompression obsorber thot thot improves cooling system efficiency. Milt and his wife, Marlys, hove been active in preserving the histaric district af St. Petersburg, Fla., where they ore homeowners in the former Huntingtan Hotel, built in the 1890s.

John Hanks '55 is the author of *Boy P.O.W.* (Blockrosewriting.com), bosed on his childhood yeors in the Philippines ond the impoct of World Wor II.

Bob Stempel '55 wos elected to the boord of directors of Genesis Fluid Salutions Holdings.

Alfred Barry '57 sold his manufacturing compony, Stonlak Carp., ta his san, **Al Barry '77**. He is naw semi-retired and living in Warcester.

Bob Galligan '57 come out of retirement ta teach part time at Grond View College in Des Moines, Iowo.

Joseph Bronzino '59 delivered o public lecture on the technalagical advances in biomedicol engineering at the University of New Hoven. He is Vernon Rooso Professor of Applied Science ot Trinity College.

Roger Kuenzel '59 ploys banjo in the Irem Shrine String Bond, providing entertoinment for the Fourth of July ond Memoriol Doy porodes neor the New Yark–Pennsylvonio border. "People come from o 50-mile rodius ta see us," he writes.

Richard Ronskavitz '59 retired 13 yeors oga after serving 20 yeors os director of the Braward County, Flo., Troffic Engineering Division. Prior to thot, he held the some title for the city of Hortford, Conn. His wife, Louise, died in 2008, leoving their two sons. He naw resides in Pompono Beoch.

Richard Davis '61 and his wife, Dorothy, retired ofter 10 yeors as innkeepers ond awners of the Pedigrift House in Ashland, Ore. "We naw spend aur winters in Cope Conaverol, Fla., and return ta Ashlond eoch summer to volunteer with the Oregon Shakespeare Festival," he writes. "During tax seasan, I valunteer with the AARP helping prepare returns."

Jesse Erlich '62 wos named in the 2011 edition of *Best Lawyers®*. He is o portner ot Burns & Levinson LLP.

Ed Scherer '63 retired fram an executive past with Sauthern Califarnia Edisan and relocated to Boynton Beach, Flo., to be neor his fomily.

Phil Baker '65 is COO af Axian Pawer Internotional, o Delowore campany that is developing odvanced lead-carban batteries and energy-starage technolagy.

Hutch Wyman '65 lives in Georgio ond has been retired since 2006. "Two grondchildren keep Sue ond me busy," he writes. "I'm olso o member af the Stane Mountain Borbershop Chorus." Hutch is the brother of **Jon Wyman '75**, and son of the lote **Bill Wyman '35**.

After warking far GE, Coaper Power Systems, ond Square D, **Phil Hopkinson '66** formed his own power tronsformer consulting business, HVOLT Inc., in 2001. A registered PE in North Caralina, he holds 15 potents, has authored numerous papers, and is on IEEE life fellow.

John Lauterbach '66 was appainted to the U.S. FDA Tobacco Products Scientific Advisory Committee. His campany, Louterbach & Assac. LLC, based in Mocon, Ga., pravides consulting services worldwide on the chemistry ond toxicology of tobacco, tabacco products, ond tobacco smoke. He hos presented papers at the Americon Chemicol Saciety's nationol meeting in Boston, the CORESTA congress in Edinburgh, Scatland, ond the Tobacco Science Reseorch Conference in Hilton Heod, N.C. His 12-year-old san, Sebostion, a budding scientist ond engineer, serves as junior librarion ond junior toxicologist for the compony.

ALUMNI AWARD RECIPIENTS

October 1–2, 2010

Ed Cheung

Paul Chodak

Jiong Ma

Leo Gestetner

Karen Padir

Robert H. Goddard Award for Outstanding Professional Achievement

Edward Cheung '85 was recognized for his work as the principal engineer for NASA's Hubble Space Telescope Project.

Paul Chodak III '85 was recognized for his work in the energy industry, currently as president and chief operating officer of AEP's Indiana Michigan Power.

Ichabod Washburn Young Alumni Award for Outstanding Professional Achievement

Leo Gestetner '95 was honored for his record of innovation and entrepreneurship, currently as the founder of Heath Capital, based in Los Angeles.

Jiong Ma '90/MS was honored for her impressive career in venture capital, currently as a partner at Braemar Energy Ventures in Boston.

John Boynton Young Alumni Award for Service to WPI

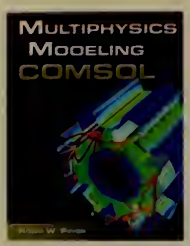
Karen Tegan Padir '90, '95/MBA was recognized for her outstanding commitment to WPI as a trustee and for bringing pride to her alma mater through her remarkable career in information technology.

Bookshelf

Recent and new publications by WPI alumni, faculty, staff

Multiphysics Modeling Using COMSOL®: A First Principles Approach

by Roger Pryor '68 *Jones & Bartlett Learning*



Pryor offers a hands-on introduction to the art and science of computerized modeling for physical systems and devices. The guidebook uses a step-by-step methodology with practice models that readers can build and run. The examples are linked to the fundamental laws of physics, using a first principles analysis approach. A supplemental DVD is included, with reference documents and executable copies of the models discussed in the book. Pryor, a COMSOL certified consultant, is vice president of research for Pryor Knowledge Systems Inc..

Chouette and More: The World's First and Only Backgammon Sci-fi Soap Opera (Book on CD)

by Mary Hickey '77 *GammonVillage*

Two-time champion of the U.S. Backgammon Open Mary Hickey has compiled all 44 installments of the monthly column she wrote for GammonVillage.com until 2007. Starting with the basic principles of chouette (a backgammon variation for rotating teams of three or more players), her commentaries progress to strategy and psychology. Starting in Chapter 11, the reader becomes part of an ongoing plotline that involves eccentric opponents, exotic locales, and a time warp. Hickey has numerous tournament victories to her credit.

Leading Change in a Web 2.1 World: How ChangeCasting Builds Trust, Creates Understanding, and Accelerates Organizational Change

by Jacksan Nickerson '84 *Brookings Institution Press*

"ChangeCasting" is Nickerson's term for leveraging Web 2.0 technology to unlock and accelerate change within an organization. His book outlines a new combination of leadership processes and guidelines, drawing examples from Fortune 1000 firms and Barack Obama's 2008 presidential campaign. Nickerson is Frahm Family Professor of Organization and Strategy at Washington University Olin Business School, and Senior Scholar, Governance Studies, at the Brookings Institution. He also serves as director of Brookings Executive Education, a partnership between the university and the institution.

The Participatory Museum

by Nino Simon '03 *CreateSpace*

Web 2.0 is more than a buzzword, argues Simon, principal of Museum 2.0, a design consultancy that helps cultural institutions create participatory, dynamic, audience-centered programs. The some "architecture of participation" that encourages us to generate, share, and curate content online can be brought to museums, libraries, and other public venues, transforming visitors from passive viewers to active contributors who help shape and enhance the experience. Simon describes the principals and practicalities of participation, and offers entry points for the bold and the cautious to embrace the possibilities for transformation. The book is available for purchase as a paperback or a PDF download, and a complete, free version is viewable online at her website, participatorymuseum.org.

Don Nitsche '66 writes, "After a career as a pension actuary, I retired from Mass Mutual in May 2009. Nancy and I have been married for 40 years (we met in my junior year at Tech). Our son lives in Las Vegas, and we visit our three grandchildren out there as much as possible. Our daughter teaches math in a public school system near Boston."

Eugene Wilusz '66, an authority on chemical and biological protective clothing, works at the U.S. Army Natick (Mass.) Soldier Research, Development and Engineering Center. His book, *Military Textiles*, (Woodhead Publishing) reviews recent research in areas such as damage resistance, comfort, camouflage, and flame protection.

Curt Carlson '67 was appointed to the National Advisory Council an Innovation and Entrepreneurship to support President Obama's drive to develop policies that foster entrepreneurship and create economic growth by bringing new ideas to the marketplace.

After working for MIT's Draper and Lincoln laboratories, **Robert Kennedy '67** has a second career as a professor of business and technology at Massasoit Community College.

Lester Small '67 retired in July 2010, after 42 years with the U.S. Air Force Research Lab at Wright-Patterson AFB.

2010 Kelenion Award winner **Rich Sadowski '68** has invented a concentrating photovoltaic (CVP) system that can quadruple the output of commercially available solar roof panels. His Solar Jaules "plug and play" modules, built from recycled automobile parts, reflect photons onto roof panels and track the path of the sun. A WPI MBA project team is evaluating commercialization routes.

Tony Leketa '69 was appointed president of Parsons Water & Infrastructure Inc. in Pasadena, Calif. He has been working in the firm's federal government group since 2005.

Ed Mierzejewski '69 retired as director of the University of South Florida Center for Urban Transportation Research and joined the Tampa office of Gannett Fleming Inc. as director of transportation research. He and his wife, Aline, celebrated their 40th anniversary last year with a three-week trip to Italy.

Bill Hillner '70 is working in Nokhodka, Russia, os senior construction manager of o large offshore production project for ExxonMobil. In his 34 years with the company, he has had severol assignments in Europe, as well os Thailand, Qator, Angola, Nigerio, and various U.S. locations, including Alasko.

Phil Warren '70 and his wife, Tammy, were morried in 2008 ond recently moved into o new home in Crestwood, Ky. Phil is vice president of Popercone Corp., o producer of specialty envelopes.

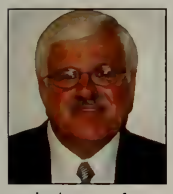
Paul Cleary '71 wos reappointed U.S. magistrote judge for the federol court in Tulso, Oklo. His three children ore working toward groduote/undergroduote degrees.

Mike Ingemi '72 is a senior stoff electricol engineer at APC-MGE. He lives in Norwood, Moss.

Bruce Beverly '73 retired from Holey & Aldrich Inc. in May 2010. After celebroting with o cross-country motorcycle ride, he storted Beverly Monagement Consulting in Auburn, Mass.

Urbon Engineering, the firm of **Edward D'Alba '73**, celebrated its 50th onniversory in 2010 and eorned ronking in Philodelphio's Top Workploces.

John Goulet '73 returned to WPI in 1993 to join the Mathemoticol Sciences foculty. He teoches undergroduate calculus ond lineor olgebra. "I'm in charge of the Moster of Mathematics for Educators (MME) progrom," he writes, "os well os on undergraduate teacher preporation program."



Roger Lavallee '73 wos oppointed senior program monager, enrollment monogement ond morketing, at the Hortford campus of RPI. His responsibilities include interfocing with key executives in Fortune 1000 companies to identify corporote leoders for career development and enrollment ot Rensseloer.

David Demers '74 ('84 MS FPE) wos appointed to the NFPA Stondards Council. For the post 27 yeors, Dove has been a member of the Massachusetts Boord of Fire Prevention Regulotions, serving os choirmon for the post seven yeors.

Bob Lindberg '74 hos served as president of the National Institute of Aerospoce since 2004. Lost yeor he wos elected president of the boord of directors of the Virginio Air & Space Center.

Stephen Page '74, a founding shareholder of Page, Mrachek, Fitzgerold & Rose, was nomed in the Intellectuol Property ond Commercial Litigation cotegories in *The Best Lowyers in America 2011*. His Florida proctice includes pharmoceuticol componies, othletic corporotions, and heolthcare orgonizotions.

Vicki Cowart '75 received the 2010 Ion Compbell Medal for Superlotive Service to Geosciences from the Americon Geological Society. The former stote geologist for Colorodo, she helped found the Associotion for Women Geoscientists and wos the first womon president of the Associotion for Americon State Geologists. She is president ond CEO of Plonned Parenthood of the Rocky Mountains.

Wilson "Bill" Dobson '75 retired from Binory Engineering Assoc., the consulting firm he founded in 1984. He writes that he does not plan to give up engineering oltogether. "I will put my engineering ond scientific knowledge to use in ossisting in the defense of indigent individuols being crushed under the jockboot of the stote criminal justice system."

Robert Horner '75 wos appointed director of public policy for the Illuminating Engineering Society.

William Jagoda '75 eorned his commerciol pilot certificote. He lives in Groton, Conn., and works for Electric Boat.

Judy Nitsch '75 received on honorary doctorote from Mossochusetts Moritime Acodemy for her contributions to engineering ond her efforts to encourage others to pursue engineering coreers.

Oliver Smith '75 has been in medical product design for more thon 30 years, focusing on non-invosive ventilation devices. He works for Philips Heolthcare in Corlsbad, Calif.

Jon Wyman '75 lives on Wymon Pond, in Westminster, Mass., ond works for IAP Worldwide Services at Hanscom AFB. He hos five grondchildren in Massachusetts and Howoii.

Terry Cirone '76 wos oppointed vice president of health, environment, safety, and security of The Chlorine Institute.

Jim Hall '76 joined Leerink Swann as a managing director in the Strotegic Advisory and Consulting Group.

Jonathan Rourke '76 is CEO of Viacor in Wilmington, Moss.

Neal Wright '76 is a vice president in the Virginio Beach office of Dewberry, where he leads the Department of Defense market segment.

George Keeler '77 is postor of the North Springfield Baptist Church in Vermont. He ond his wife, Fron, have two children.

Congratulotions to **John Osowski '77**, who was elected Civil Engineer of the Year by the Rochester Section of ASCE. He is director of plonning/construction at The College at Brockport, part of the State University of New York system.

Jeffrey Tingle '77, feotured in the Summer 2010 issue of *Tronsformotions*, is now vice president of software development for PolyRemedy.

Peter Rowden '78 was promoted to vice president, corporate monufacturing operations, at Hologic Inc. He wos recently elected to o second term os o Becker College trustee.

GEI Consultants

Bill Walton '78 wos recognized os 2010 Civil Engineer of the Yeor by the ASCE Illinois Section. He works for GEI Consultants, Midwest Region.

Ernie Cormier '81 was appointed president ond CEO ot Nexage.

Ted Nevells '81 joined the project monagement teom of RF Wolsh Collaborative Portners in Boston.

Frank Polito '81 wos named Citizen of the Year by the Atkinson (N.H.) Lions Club. He recently stepped down from his role os town moderator ond chairmon of the Zoning Board of Adjustment ofter 18 yeors on the boord. His son, David, is a junior ot WPI.

David Gillespie '82 is CEO of Aleut Corp.

Stephen Kaneb '82 was elected o trustee of The Cotholic University of America. He ond his wife, **Andrea (Fielding) '84**, live in South Hampton, N.H., with their five children. They return to WPI for a footboll gome eoch year.

ALDEN SOCIETY

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For a confidential consultation, contact Audrey Klein-Leach, executive director of planned giving, at **508-831-5076** or **akleinleach@wpi.edu**.

Deborah Chichlowski Luszey '82 teaches math in Hudson, N.H. She ottended the Nationol Council of Teachers of Mothematics Affiliate Leoders Conference in Reston, Va., lost summer.

John Sansoucy '82 joined Blackstone Monogement & Consulting as heod of the Leon Manufocturing Practice. He lives in Douglos, Moss., with his wife, Patricio.

Mark Scott '83 continues ot Sikorsky Aircroft, where he is now technicol leod for rotor systems. His homebuilt four-place oirplone project is nearing completion. Mork's eldest son, Erik, is o member of the WPI Class of 2014.

Jean (Salek) Camp '84 writes from Howoii, "David and I hove been living on Kaua'i for about 10 yeors ond still love it. My project monogement consulting work hos slowed down, which is giving me more time to enjoy recreational outrigger poddling in Honolei and eating pizza mode in our outdoor wood-fired brick oven. Troveling to visit fomily ond friends is a welcome escape."

Robert Trocki '84 was promoted to senior director of actuarial pricing at Fallon Community Health Plon in Worcester. He lives in Shrewsbury with his wife, Cindy, ond three children.

1985

Ed Cheung, a native of Aruba ond o subject of the Kingdom of the Netherlonds, wos knighted by Queen Beatrix in June 2010. He received the *Orde von de Nederlandse Leeuw* (Order of the Netherlonds Lion), the Kingdom's highest civilion honor, for his work on the Hubble Space Telescope and his efforts to motivate and inspire interest in science and education omong island youth in his homelond. Sir Cheung is the first Caribbean-born citizen to receive the honor.

Paul Chodak recently tronsitioned to Indiana Michigon Power os president ond COO.

Dave LaBranche joined the federol civil service in 2008 for a five-yeor oppointment as a Highly Quolified Expert (HQE). "I expect to toke o permonent civilian position this yeor, if oll goes well," he writes. "I om on executive in the Deportment of Defense, working on geospotiol technology policy and business enterprise integration."

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CAREER CORNER

By Connie Horwitz, Associate Director, Career Development Center

Your Career Strategy on a Global Scale

How many of us could have imagined when we were students that our professionol work might entoil developing a routine comfort level communicating with people from countries other thon our own? Perhaps the communications ore direct, with members of your teom. Perhaps it's participoting in conference calls that now include on overseos connection. Perhaps you ore communicating with foreign vendors that provide services ond products to your orgonizotion. Regordless, the world of your job, your coreer, your industry has no doubt stepped outside the boundories of the United States in some fashion. The odds that this trend will stop ond revert to a more insulor post ore probobly slim to none. And the likelihood that people will continue to see changes in their job descriptions is going to increose os the obility to understand globol business becomes more critical to succeeding in one's role. So, what does this ultimotely meon for everyone?

The odoge "The best defense is o good offense" moy truly opply here. Rother than weoring blinders thot support the hope of a short-term trend, building a coreer plan thot incorporotes the possibility of some globolly driven impoct affecting your work is smort ond practicol. Looking ot your industry's trends toward global business relations con help you identify where your skills, aptitudes, ond strengths fit in the picture. Ask yourself whot you lock in meeting the requirements of o role thot may demond more comfort with internotionol communications. Seek opportunities to help you acquire the necessary skills; for example, participating on internationol colls, troveling for on overseas project, or researching international vendors. If you are port of a small business, applying this strotegy to your business as a whole moy help leod your company to even more profitoble survival in the global arena.

So, os you contemplate the wisdom of coreer plonning for o global future, consider your readiness for this—with WPI educoting students from more thon 70 countries outside the United States, you may soon be communicoting on an international call. From your desk. With o WPI alum.

Contact Connie at **cdcalumni@wpi.edu**

Christopher Papile was inducted into the Academic Hall of Fame at Archbishop Williams High School in Braintree, Mass. He is a chemical engineer and the chief technology officer at Catalyte LLC, a clean energy consulting firm.

Jo Anne Shatkin is CEO of CLF Ventures, the nonprofit consulting affiliate of the Conservation Law Foundation. She previously served as managing director.

1986

Barry C. Fougere joined BigBelly Solar as chief operating officer.

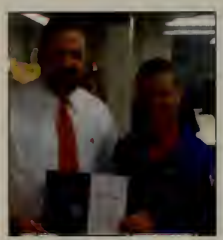
John Jezowski is senior vice president and relationship manager at Webster Financial Advisors, based in the firm's Hartford, Conn., office.

1987

Brian Teague formed Patent Law of Virginia PLLC, a Richmond-based national firm that represents institutional and individual clients.

Michael Thompson is North East Region sales manager at Kammann USA.

1988



Daniel Barry (left, with NASA Astronaut Greg Johnson) was awarded NASA's Silver Snoopy, a special honor that recognizes outstanding achievements related to human flight safety and/or mission success. The award is presented personally by NASA astronauts. In his 22 years with David Clark Co. in Worcester, Barry has made innumerable contributions to the design, development, qualification, manufacture, and operational support of astronaut protective equipment. He currently serves as vice president and director of research and development.

Allen Bonde writes, "I am a co-founder and CMO of social marketing software start-up Offerpop, based in NYC (I'm still outside Boston). We launched in June 2010. I'm always happy to hear from alums in the Internet or consulting biz."

Carleen Maitland is on leave from her position as associate professor of information sciences and technology at Penn State to serve as a program manager in the Office of International Science and Engineering at the U.S. National Science Foundation in Arlington, Va. She manages grants to foster research collaboration between U.S. and Middle Eastern scientists and engineers.

1989

Linwood Bradford was promoted to president and CEO of Conning & Company.

1990

Paul Dombrowski received the Morgan Operational Solutions Award from the Water Environment Federation (WEF), an international technical and educational water-quality organization. He works for Woodard & Curran.

Karen Tegan Padir joined EnterpriseDB as vice president of products and marketing.

Mark your calendars now!
Activities are open to *all* alumni.

Classes celebrating anniversary years:
1936, 1941, 1946, 1951, 1956, 1961, 1966, 1971, 1976, 1981

WPI Alumni & Reunion Weekend

JUNE 2–5, 2011

Thursday, June 2
> Annual Alumni Golf Tournament, Stow Acres Country Club

Friday, June 3
> WPI Impact: Words from the Provost
> Alumni College Sessions
> Campus Fair
> Alden Society Luncheon
> New England Clambake, 1962–2011
> 50-Year Associates Reception and Dinner (Classes of 1961 and earlier)
> Casino Night

Saturday, June 4
> A Conversation with President Berkey
> Alumni College Sessions
> Reunion Parade

Sunday, June 5
> Jazz Brunch
> Class of 1961 Remembrance Event

Please remember to update your email address at
alumniconnect.wpi.edu
or contact us for assistance.

CHECK YOUR MAIL SOON FOR COMPLETE REGISTRATION INFORMATION.

Questions? Please call the WPI Alumni Relations Office at **508-831-5600** or log on to **alumni.wpi.edu/alumniweekend**.

From the Alumni Association President...

I'm happy to share with you an update from the Alumni Association and the Office of Alumni Relations on activities in 2010, and highlights of exciting events planned for 2011.

Homecoming Recognition Awards — and Honoring Tuna

The Alumni Association honored five alumni at Homecoming (see page 35). They join those who were recognized at Reunion for their professional achievement and their service to WPI.

Following the Rope Pull, about 200 students, alumni, and friends gathered to honor Bill "Tuna" Trask as he received the first-ever Alumni Association Distinguished Service Award.

Sharing reminiscences about Bill's impact on their lives and careers were Tom Driscoll '11, Bill Cunningham '77, Steve Rubin '74, Janet Richardson, and Mary "Ma" Fell. State Senator Karen Spilka (who's married to Joel Loitherstein '73) presented Bill with a proclamation from the Commonwealth recognizing his contributions to the WPI community.

In conjunction with this event, the Alumni Association hosted an online auction where many alumni donated and purchased items in support of the WPI Alumni Association Scholarship Fund. Net proceeds from the event to honor Bill and the online auction totaled $11,000, which will be used for student scholarships.

The Alumni Association plans to host another online auction in conjunction with Homecoming 2011 to raise money for the scholarship fund. If you'd like to donate to or assist with the auction, contact Aubrey Valley, associate director of alumni relations, at avalley@wpi.edu.

Class Ambassadors

In partnership with the Office of Alumni Relations, the Alumni Association will be rolling out a Class Ambassador program. We are looking for alumni interested in supporting their classes in this role. Many of you already serve as members of your class leadership and reunion committees or were part of the former Class Board of Directors, and we hope you will continue in your role as part of the Class Ambassador program. For those not yet involved, this is a great opportunity to give back and to connect with your classmates. Additional details will be published in *The Bridge* and future issues of *Transformations*.

Alumni Global Engagement (AGE)

The AGE initiative focuses on building connections with alumni who do not have the luxury of returning to campus for events. This program will expand the efforts of the successful Regional Clubs program and will include technology solutions and various communication methods to build connections among alumni and with WPI. More info is forthcoming.

Additional Involvement

Another way to become involved with and support WPI is the **STAR Mentoring** program—an effort that matches alumni with students interested in benefitting from the professional and life experience of alumni. No matter where you live, you may participate; contact Connie Horowitz, associate director of the Career Development Center, at chorwitz@wpi.edu.

Thinking of traveling outside the United States soon? The **Alumni Association Travel** program invites you to join fellow alumni and visit a WPI Project Center. The Alumni Association has partnered with Collette Vacations to offer several trips to exciting locations where WPI has project centers. Find out more about this travel package at www.wpi.edu/+alumnitravel. By participating in this program, you will support a major initiative of the Alumni Association—providing scholarships to students. Ten percent of every trip booked goes to the Alumni Association scholarship fund.

In closing, I ask that each of you consider getting more involved—whether by STAR Mentoring or the travel program, by attending an event in your local area, or by returning to campus for Homecoming or Reunion. I am confident you will have a fantastic time! Write to me at joyce.kline@alum.wpi.edu to discuss ways to become involved.

Regards,

Joyce

Joyce S. Kline '87

Patrick Welge is president of EMCO Maier Corp. in Columbus, Ohio. "EMCO is one of Europe's premier machine tool builders, and the Columbus location is our North American headquarters," he writes.

1991

Gudmundur Gudmundsson (MS) is vice president of science and technology at Kerecis, based in the company's Reykjavik, Iceland, office.

Edward Hunt qualified as a Certified Insolvency and Restructuring Advisor (CIRA). He is principal of Hunt Service Solutions in Fort Lauderdale, Fla.

Susan (Chilvers) Jones is manager of business analysis at the Association of American Medical Colleges in Washington, D.C. She, her husband, Keith, and their son Parker are thrilled to announce the birth of their second son, Mason Keith, on March 30, 2010, in Annapolis, Md.

Coast Guard Rear Adm. **Roy Nash** is deputy federal on-scene coordinator for the U.S. Government's response to the Deepwater Horizon oil spill in the Gulf of Mexico.

Megan (formerly Michael) **Wallent** is a manager in the GFS Manageability Services Group at Microsoft. She discussed the workplace aspects of her transition from male to female in a *Harvard Business Review* article called "Changing Gender on the Job."

Ed Connor '92, dean of admissians at WPI, recently maved ta Staw, Mass., with his wife, Jen, (farmer assistant directar of alumni relatians at WPI), and their san, Sean, wha'll turn 3 in May. At a summer gathering hasted by Ed and Jen far WPI buddies and their families are, clackwise fram back raw, **Sue (Moser) Roberts**, **Ed Connor**, **Jim Uzdarwin**, **Tony Chiulli**, **Mike Bristol '93**, **Bruce Yurczak '93**, **Michelle Thackston '93**, **Mike Thibodeau '93**, **Dan Eaton '93**, and **Lou Roberts**. "It had been quite a while since we had seen same af aur friends, and a gaad time was had by all," says Ed. "At ane paint we counted 21 peaple in the paal!"

1993

Alfred Grasso (MS CS) was elected vice chair af the board of AFCEA International (Armed Forces Cammunicatians and Electranics Assaciates).

Jon Larrabee warks far Kochek Ca. as a design engineer far turf and irrigatian praducts.

Sam Tetlow was recruited ta the role af chief business afficer far Integrated Labaratary Systems, af Research Triangle Park, N.C. He and his wife, Laura, reside in Raleigh.

Jim White is campaigning ta bring w00stock—a variety shaw that bills itself as "3 hours of geeks + music" ta Worcester. "I still live in the area, and it's high time Warcester was recognized as a geek city in its awn right," he says.

1994

Sandor Becz was named head af glabal engineering for Lenze SE, a warldwide manufacturer af electranic and electramagnetic products far the automation industry. He lives in Tolland, Conn., with his wife, Michelle, and sans, Cannar and Spencer.

Ted Dysart was recognized by the 2010 NACD Directarship 100 far recruiters.

Stephen Foskett is directar of data practice for Cantoural Inc.

Dena (Niedzwiecki) Mechoso and her husband, Diega, praudly annaunce the birth af their second daughter, Alina Mia, born May 7, 2010, in Pasadena, Calif. Her big sister, Ella, just loves having a baby sister.

1995

Christopher Dyl is chief technalagy afficer at Turbine Inc., which was acquired by Warner Bras. last year. He alsa serves on WPI's IMGD Advisary Baard.

Jason Frost completed his internal medicine residency at St. Vincent Hospital in Worcester and jained his wife in Philadelphia. In July he will begin a twa-year Critical Care Fellowship at Brawn University.

Eric Pearson was named vice president at Enterprise Bank in Lawell.

Paul Seppanen, president of Energy Maintenance Service LLC, was a keynote speaker at the CEE Department's seniar banquet in April. He alsa delivered a lecture for the WPI cammunity on wind farm develapment and canstruction.

1996

Jenn (Healy) and **Mark Anderson '95** welcomed their third child, Lucas James, an July 17, 2009. Mark is a seniar fire pratectian engineer at Vermont Yankee. Jenn serves as the Risk Assurance HR leader at PricewaterhouseCaapers. They live in Chesterfield, N.H.

Eric Maynard works for Jenike & Jahansan as a senior engineering cansultant.

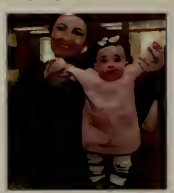
Jesse Parent is still tauring, perfarming with JaKyr and Jesster, and teaching imprav camedy. He has alsa branched aut into perfarmance paetry and hapes to compete in the Natianal Poetry Slam in Bastan next summer. He warks far Sarenson Media in Salt Lake City.

Joe Schaffer faunded an engineering and sustainability consultancy called Green Enviranmental Assaciates LLC (www.greenasc.com) with twa partners. The new cross-disciplinary firm is based in the NYC metra area but services clients glabally.

Rebecca (Rubenstein) Sgambati is aperatians camplex manager for the Valera Energy Carp.'s Benicia (Calif.) Refinery. She and her husband, David, have twa children.

Sean Squire is Naval Undersea Warfare Center (NUWC) technical advisar to the Cammander af Pacific Submarine Farces (COMSUBPAC) at Pearl Harbar, Hawaii.

1997



Rebecca (Prince) Byrne was diagnased with invasive breast cancer just 13 weeks inta her first pregnancy. She chranicles her journey and celebrates the jayaus birth of her daughter, Emelia Giavannina, in July 2010, in her blag, My Baab and My Baby.* Many WPI alumni supported her 2010 "Run, Walk ar Crawl" 5k fundraiser, which braught in more than $16,000 far the Dana Farber Cancer Institute. Far the 2011 race date, watch her website, wantlaydown2cancer.com.
**mybaabandmybaby.blagspat.com*

Jim Goss is vice president af aperations far Photabucket.

Brent Modzelewski received the 2009 Medical Design Gold Award far Excellence in Design for his TRUE2ga bload glucase meter. He is directar af engineering far Home Diagnastics Inc. in Fart Lauderdale, Fla.

Steph Torrey and her husband, Jahn Vuk, jayfully annaunce the birth af their first san, Elijah Mathew, an March 2, 2010. "All are daing well!" she writes.

1998

Michelle (Prudente) and **Bill Lucas** welcamed the additian af Rachel Elizabeth ta their family an Oct. 19, 2009. "Her big brother, Anthany, adores her," Michelle writes. They live in Quakertawn, Pa.

In the Public Eye

U.S. Rep. **Todd Akin '70** (R-MO) was re-elected in 2010 with 67.9% of the vote. A member of the House Armed Services Committee, he was quoted in the **Wall Street Journal** in support of the Marine Corp's Expeditionary Fighting Vehicle (EFV) amphibious armored tank ● **Planet Green Network**'s "Dean of Invention" series, starring **Dean Kamen '73**, premiered last fall with eight episodes on cutting-edge technologies from microbots to organ regeneration ● **David Gewirtz '82** appeared on a **History Channel** special called "The President's Book of Secrets" to discuss the security of White House email and messaging technology ● Professor **Helen Vassallo '82** (MBA) was credited with breaking down barriers for women in recent profiles in **Worcester Business Journal** and the **Telegram & Gazette**. She joined the WPI faculty in 1967 as one of two female professors ● **Mark Macaulay '89** appeared on **Renovation Nation** with Steve Thomas to install a natural-gas Freewatt hydronic system. Mark is director of product engineering for Climate Energy LCC, a joint venture of ECR International and Yankee Scientific ● **Matt Beaton '01** has been in the spotlight with his election to the **Massachusetts House of Representatives** in the 11th Worcester district, and a **"This New House"** episode filmed at his passive solar home in Shrewsbury. "This is a Prius," he told the *Worcester Telegram & Gazette*. "All the other houses around here are pickup trucks." ● **Foursquare** co-founder **Naveen Selvadurai '02** appeared in a **Gap** advertising video and Facebook campaign that featured celebrities raising money for their favorite charities ● The **Boston Herald** ran a story about Neuron Robotics' co-founders **Bob Breznak '08** and **Kevin Harrington '08** ● 1st Lt. **Andrew McCarthy '08** appeared in the **New York Times** online video "A Year at War," which followed the First Battalion, 87th Infantry of the 10th Mountain Division during the surge in Afghanistan ● **NASA TV** posted a launch-time video interview with **Patrick Renaud '08**, the Orbit 3 ISS pointing officer for the International Space Station flight control team ● **Nick Pelletier '09** was quoted in a **Telegram & Gazette** story on the 75th anniversary of the Phi Kappa Theta house and his role in re-opening the WPI chapter.

Jeevan Ramapriya works in the Boston Statehouse as deputy chief of staff in the office of Senator Steven A. Baddour (D-Methuen).

1999

Charlie Atencio graduated from MIT in June 2010 with a master of science (SM) in engineering and management.

Matthew Ducey and **Jennifer Shemowat '00** were married Oct. 10, 2009. He is a software engineer at Network Engines. She works for Fay, Spofford & Thorndike.

John Lehane was promoted to project manager at Consigli Construction Co.

2000

Greg Jutkiewicz was co-producer and lighting designer for a Boston production of Harold Pinter's *Betrayal* last spring. Active in the Boston theatre scene, he established the Factory Theater in 2007 to specialize in small, intimate theatre productions.

Alida Tei joined Winkenwerder Co. as a senior consultant for financial services and information technology.

Matt Young has been with Microsoft since graduation, including two years at the European Microsoft Innovation Center. He returned to WPI to offer a CS lecture on Microsoft Application Virtualization (App-V).

2001

Kellie (Martin) and **Brian Bresnahan '98** welcomed their second daughter, Piper Genevieve, on June 17, 2010. She joins big sister, Claire.

William McManus (MS FPE) received the 2010 Thomas Carroll Outstanding Teacher Award from Roger Williams University's School of Continuing Studies. "I'm an RWU alum from 1982, and I've been an adjunct faculty member since 2002 and an academic advisor since 2004," he writes. "It's a great feeling to give back to RWU and to help our students."

2002

Curtis Britton joined FARS Realty Group. A resident of Medford, Mass., he focuses on residential sales and rentals in Suffolk and Middlesex counties.

Marc and **Meghan (Fraizer) Cryan** announce the birth of their third and fourth children. Twins Hazel and Jack arrived on May 11, 2010, totaling almost 14 pounds of baby. Big sisters Emma, 4, and Molly, 2, are very proud of their new siblings.

Kelly Jaramillo celebrated the completion of the first solar thermal system at Kirtland Air Force Base. "It all started at WPI, with my MQP on fuel cells," she writes. "Eight years ago I found my love for the idea of renewable energy. During my Air Force service, I tried long and hard to maneuver my way into working on energy issues. Then, while working in the private sector with Weston Solutions Inc., I teamed with 310 Solar in Albuquerque to win the contract for the Kirtland project, a solar collector and heat exchange system for the base's indoor Olympic-size swimming pool. Now I've come full circle; I'm back in the Air Force as a civilian engineer, with something real on the ground. I couldn't be happier, knowing I played a small part in launching a renewable energy project in my home state of New Mexico!"

Foursquare co-founder **Naveen Selvadurai** was one of *Inc.* magazine's Coolest Young Entrepreneurs and *Fast Company*'s Most Creative People for 2010. His location-based social networking service has grown to 7.5 million users in its first two years.

Jack Shindle (MS ME) was appointed vice president/engineer at Axion Power International in New Castle, Pa.

2003

Andrea Hubbard graduated from Ross University School of Veterinary Medicine in 2010.

Kevin Thompson intraduced the Pzee Computer—o user-friendly system designed far senior citizens, with on intuitive interfoce, lorge, eosy-to-read buttons, ond twa yeors af full technicol support included in the basic price. Kevin blags on common issues in the camputing world at pzeecomputer.cam/blog.

2004

John Baird wos invited ta give o solo presentotion ot South-by-Southwest (SXSW) Interoctive 2011: "Interoctive Comics: Techniques ta Enhance Moth Educatian." The presentation wos based an his yeors af wark using ort in variaus educotionol fields. He will present further reseorch inta comics ond educatian ot the Pop Culture Associotion in April ond the Canference for the Advancement of Mothematics Teoching (CAMT) in July.

Tom Daly ronked amang the *Union Leoder*'s 40 UNDER FORTY for his successful leodership of Dynamic Network Services Inc. in Manchester, N.H.

Tim McGreal officiolly launched the Alarm Arm an the QVC shapping network. The device allows users ta instoll smoke detectors ond chonge batteries without ladders. "Eight years af work distilled dawn to eight minutes," he soys of the video segment an the QVC website.

Anthony Paoletta morried Katie Bawen lost yeor. He is on industrial engineer supervisar for UPS.

Stefanie Wojcik ran her third Baston Marathon in April 2010, as port of the Dano Forber Marathon Chollenge teom.

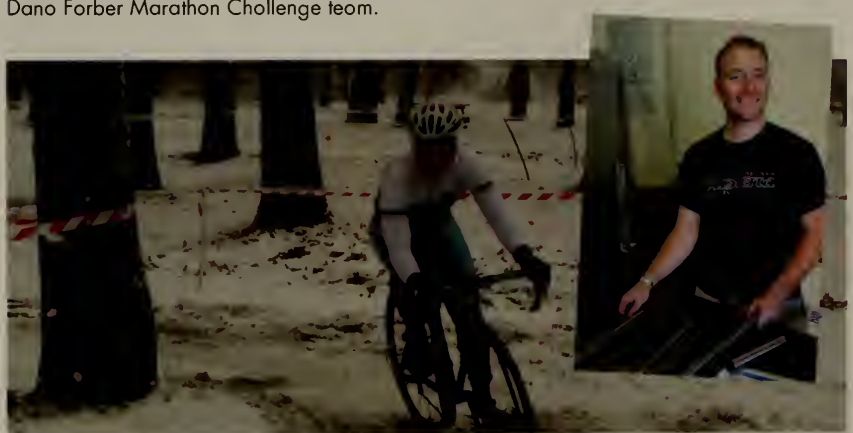
2005

William Herbert took his ooth os o notary public for the Cammanwealth af Mossachusetts far a commission thot expires in September 2017. He lives in Samerville ond is an applicatian support engineer at Nuance Communicotions.

David Toth (MS, '08 PhD) received the Edword G. Roddy Outstanding Teocher Aword ot Merrimack College, where he is an assistont professor of computer science.

2006

Erica Anderson ond **Justin Clark** were married July 10, 2010. The wedding party included moid of honor **Romiya (Glover) Barry '04** and best mon Andrew Gioquinta, alang with Pomela Anderson, **Elizabeth Gottardi**, **Jonathan Menard**, Mork Orrica, **Andrew Thayer**, **Mary Kate Toomey '08**, ond Nichole Verissimo. Erica and Justin live in Woburn, Mass.



Anthony Maietta '04 displayed severol of his custam-built bicycles ot the 2010 North Americon Hondmode Bicycle Shaw, including a ane-af-a-kind creotion with integroted GPS capabilities. Maietta, who first leorned haw ta design ond build bicycles as a mechonical engineering student ot WPI, now fabricates custom bicycles for cyclists throughout the world ot his workshop in Shirley, Mass. In addition to operoting Moietto Handbuilt Cycles, he works in R&D for cutting-toal monufocturer Simands Internotionol. "It's really o symbiotic relotianship," he soys of his duol coreer. "Creating products myself with my own honds in the bike business gives me o better understanding of how ta design products for Simonds that will be successful an the production floor. And my mechanicol engineering degree gives me the understonding of the principles at play when I design ond build o bike frame."—*Kesler Roberts*

Kristin Collette ond **Bryan Bigda '09** became engoged in July ond ore plonning a Cape Cod wedding in October 2011.

PhD student **Zach Pardos** ('09 MS CS) ploced second omong student teams (and fourth overoll) in the 2010 KDD Cup Educatianal Data Mining Challenge. His entry, "Using HMMs ond bogged decisian trees to leveroge rich feotures of user ond skill," was developed with Prafessar Neil Heffernon (CS) ta predict student responses in an intelligent tutoring system. Zoch received $3,000 and travel funds to present his findings at the KDD annual workshop.

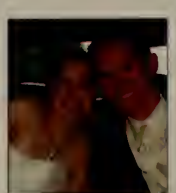
2007

David Greene groduoted from UNH Law (formerly Pierce Low Center) in May 2010 with o juris dactar and a master of lows in intellectual property. He gove o lecture an potent low for WPI groduote students in the Moteriols Science and Engineering Program.

Tom Hayes ond **Monica Giddings '06** were morried an July 17, 2010. Mony WPI alumni attended the event, ond the wedding porty included **Hilary Hayes '04**, **Laurie Carpenter '06**, **Gharam Han**, ond **Mark Meko '08**. Tam works ot Genzyme os o cell pracess engineer; Manica is a biology teacher ot Assobet Valley Regionol Technicol High Schaal. The couple recently bought o hause in Lancoster with a yord big enough far their new Dalmotion puppy.

Air Farce Lt. **Bryan Kaanta** is unit admissions officer for WPI's ROTC program.

2008



Ryan Kendrick and **Erin Vozzola** ('07 MS) were married May 8, 2010. Erin's fother, **Bob Vozzola '80**, walked her dawn the aisle. Clossmates in attendonce included **Arly Dungca**, **Paul Dragnich**, **Michael Sangillo**, **Jessica Copp**, **Victoria Richardson**, and **Kristin Collette '06**. The cauple lives in Hauston.

Jodi Lowell was profiled in *Diversity/ Careers in Engineering & Informotion* in on orticle an advonced engineering degrees. She received a master's in moteriols science ot WPI in foll 2010.

Mary Kate Toomey is a civil engineer in the Aviation Division of Jacobs Engineering Group's Boston office. Her work includes airside engineering design, including runways, taxiways, and aprons. She was named to the Governor's Advisory Council on STEM (Science, Technology, Engineering, and Math) Education as a subcommittee member. She is pursuing a certificate in business.

2009

Pat Benson was profiled by the *Foxboro Reporter* on his marathon runs in New York and Boston. He works for Pfizer.

The *Providence Journal* ran an article on **Matt Doherty**'s "double life" as a management engineer and a career boxer. He earned a master's degree at Brown in innovative management and entrepreneurial engineering, and recently took a job with Goldman Sachs in New York City. He intends to continue training and told the paper he still dreams about fighting in Madison Square Garden or Vegas some day.

Cody Wojcik and his father, Ted, designed the Mow-Ped—an environmentally friendly pedal-powered bicycle-mower that was unveiled at the 2010 North American Handmade Bicycle Show in Virginia and featured in *Make* magazine.

2010

Lianne Elsner (MS CS) and Nathan Poisson were married Sept. 4, 2010. Lianne is a software engineer for Raytheon Co. They reside in Hudson, N.H.

Briana Lorenzo's participation in the campus Relay for Life and her internships in genetics led to her career as a clinical lab technologist in the Tumor Cytogenetics Lab at Mount Sinai Hospital in New York City. Her continued leadership in fundraising events was recently profiled on the American Cancer Society's website.

Grazia Todeschini (PhD) joined EnerNex Corp., where she focuses on wind power plants. She is the author of *Wind Energy Conversion Systems* as *Active Filters*.

Don't Call It a Comeback *The revered tradition of WPI wrestling continues with enthusiastic support from alumni*

At Homecoming 2010, the wrestling alumni community gathered in Alumni Gym to celebrate the 25th anniversary of WPI's first New England Championship in wrestling, and to share fond memories of their respective years on the team. This extension of its annual gathering on the Quad provided an opportunity for members to reflect on the program's history as well as its future.

Though its level of success has waned in recent years, the wrestling program remains a revered tradition, upheld by many talented and dedicated athletes. And new head coach and wrestling alum Steve Hall '87 is committed to rejuvenating the program.

"I want the current student-athletes to experience what we experienced," Hall says, referring to the days when Alumni Gym was packed to the rafters with fans. "I want them to feel they are part of something bigger than themselves—on campus and with alumni."

Several initiatives are under way to help connect today's wrestlers with wrestling alumni and to re-energize the program. Hall has connected each student wrestler with an alum who can offer guidance on the student's education and career options. He is also working toward strengthening the connection between wrestling alumni and WPI itself, through such activities as the celebration at Homecoming. In addition, wrestling alumni have launched a special fundraising initiative to establish a new endowment. Called the Grebinar Wrestling Endowment Program, it will support the wrestling program's annual operating expenses and important renovations to the wrestling practice room, among other wrestling priorities. One hundred percent of the funds will go to WPI wrestling.

Above, Phil Grebinar chats with a former member of Grebby's Grapplers; at right, members of WPI's wrestling family

The endowment is named for former head coach Phil Grebinar, who built WPI wrestling into a powerhouse that dominated New England collegiate wrestling for more than two decades. With an overall record of 499-286-11 (.634), wrestling is the most successful athletics program in WPI history. Wrestling has also placed 14 athletes in the WPI Athletic Hall of Fame. Alumni from the Grebinar era describe it as "not a team, but a family; not a sport, but a philosophy for life."

"It can't be overstated that this was the single most important decision I've made in my life—coming to WPI and being part of the wrestling program," says Hall. "I came out of here with a full toolbox, from my education and from my participation in the wrestling program."

In a special online feature, Hall and assistant coach Garrett Trombi '95, along with Tony Masullo '80, Rich Testa '84, and Brian Chu '92, share memories of the Grebinar Era and insights about how their WPI wrestling experience helped launch their success after graduation.

Visit wpi.edu/alumni to read more about WPI's wrestling tradition and its bright future. For information about the Grebinar Wrestling Endowment Program, contact Donna Stock, director of development, at 508-831-6073 or dstock@wpi.edu.

Raymond J. Forkey '40, Trustee Emeritus

WPI mourns the passing of Ray Forkey on Feb. 23, 2011. A former president and longtime leader of the Alumni Association, he served as trustee from 1968 to 1989. A quarterback on the undefeated 1938 football team and an inaugural member of the WPI Athletic Hall of Fame, he took great interest in WPI sports, chairing the committee that decided to continue the football program despite several losing seasons. With his wife, Janet, he left his mark on the campus with the Forkey Conference Room in Harrington Auditorium and Forkey Commons dining area in the Campus Center. They also endowed the Raymond J. Forkey '40 Scholarship Fund and funded major renovations to Higgins Laboratories. Forkey retired from Coppus Engineering in 1980 as president and CEO. A member of the Worcester Golf Club for more than 50 years, he achieved numerous championships and milestones. He was predeceased by his wife (who died in 2009) and a daughter; he is survived by a daughter. Ray was a member of Sigma Phi Epsilon and Skull.

George D. Macredis '34 af Englewaad Cliffs, N.J., died July 23, 2009. He leoves his wife, Morjorie (Porusis), and two daughters. He retired from Westinghouse Electric Corp. as an electrical engineer.

Edward R. Markert '34 of Amherst, Mass., died Morch 18, 2010. He began his career at Sovage Arms Carp., served as gun expert during World Wor II, ond worked ot the Springfield Armory. He loter served as o residential developer in the Elf Hill area af South Amherst. Morkert wos predeceosed by his wife, Cloire (Loudenot), o son, ond o daughter. Twa daughters survive him. He was the fother-in-low of Poul Monnheim '61.

Nelson Marshall '36 of Portland, Ore., died March 25, 2009. A langtime oceonogropher, he retired from the University of Rhode Islond os professor emeritus in 1984. He wos the outhor of four books; the last, *Oceonogrophy: An Observer's Guide*, was published pasthumously. Predeceased by his wife, Groce, in 2006, he is survived by six children.

H. Foster McRell '36 (Theto Chi) of Worcester died Sept. 25, 2009. His wife, Lais (Denison), died in 2003. Two sons survive him. He was o chemical engineer far Mansanto Chemical Co.

Sidney D. Alpert '37 (Alpho Epsilon Pi) af Lexingtan, Moss., died Oct. 16, 2009. He was a structural engineer for Stone & Webster for 44 years. He leaves his wife, Freido, and o son.

Nathaniel I. Korman '37 of Albuquerque, N.M., died Feb. 11, 2010. He is survived by his wife, Ruth, ond two sons. Karman warked far Radio Corporotion of America as director, advonced military systems, in the compony's Defense Electronic Products division. He wos the outhor of *The USA at Risk*.

Former Phi Sigma Kappa nationol president **Robert B. Abbe '38** of Tequesto, Flo., died Nov. 1, 2010. He served on the fraternity's Grand Council from 1954 ta 1968 ond wos grond president fram 1962 to 1964. He worked for Bethlehem Steel and Smith-Winchester Monufocturing, ond later taught ot Thomes Volley Stote Technical Callege. Survivars include his wife, Eleonor, his son, Pattan Abbe '70, ond o doughter.

Raymond K. Houston '38 ('39 MS) (Lombdo Chi Alpho) died Dec. 4, 2009. He leaves his wife, Volerie (Doss), ond three children. A former electrical engineering instructor ot WPI, he tought ot the Noval Pastgraduate School in Monterey, Colif., ond retired in 1975.

Earle R. Vickery Jr. '38 (Sigmo Alpho Epsilon) of Princeton, Moss., died Oct. 16, 2009. A longtime employee of the Deportment af Environmental Management (now the Department of Recreation and Conservotion), he served as superintendent of the Mount Wochusett Stote Reservotion ond loter developed ond operoted the Wochusett Mountoin ski oreo. Predeceosed by his wife, Colisto (Hawe), ond o son, Earle R. Vickery III '75, he leoves three sons.

Fred E. Wiley '38 (Theto Chi) of Monhegon ond Brunswick, Moine, died Jon. 3, 2010. He wos o plostics engineer who held 40 patents ond helped develop the cooling systems for the Monhotton Project. He is survived by his wife, Foryl (Finn), ond by two children of his first wife, Edith, who predeceosed him. He wos olso predeceosed by o son.

Jack F. Boyd '39 (Sigmo Phi Epsilon) of Loconia, N.H., died Dec. 20, 2010. Predeceased by his wife, Morion (Soge), he leoves four children. After severol manufocturing positions, he purchased Nashua Brass in 1952 and served os president until retiring in 1952.

Harding B. Jenkins '40 (Phi Gammo Delta) died April 28, 2010, ot the Idoho Veterans Hame in Baise. He begon his coreer with Americon Opticol os o troinee in 1940 ond retired 32 yeors later os corporote vice president. Predeceased by his wife, Elizobeth (Stoddord), o son, ond o doughter, he is survived by o doughter.

Carlton F. Swasey '40 (Lombdo Chi Alpho) died Aug. 10, 2008, leoving his wife, Jeon, ond two children. A retired outo mechanic, he later ran Hush Puppy Kennels in Daytana Beoch, Flo.

Alfred F. Andersen '41 (Lambdo Chi Alpha) af Santa Rasa, Colif., died July 25, 2010. An activist for disormoment, economic justice, and free speech, he wos the outhor of *Liberoting the Americon Dreom ond Chollenging Newt Gingrich Chopter by Chapter*. His survivors include his wife, Dorothy Dungon Norvell Andersen, his former wife, Connie, ond three children.

Thomas R. d'Errico '41 of Northompton, Moss., a retired professor of civil engineering, died Moy 18, 2010. Predeceosed by his wife, Morgoret, he leoves two doughters ond o son. He began his teoching career ot Clorkson College and retired fram Narth Dokota State University.

Victor A. Kolesh '41 of Worcester died Dec. 9, 2009. He wos retired from Simonds Sow & Steel Co. (now Simonds Internatianal) and previously worked for Riley Stoker Corp. His wife, Victorio, died in 2010. A World Wor II veteran of the U. S. Army Air Corps, his lost mission wos flying o B-29 to Hollywood for the filming of "The Bomboo Blonde," o movie obout o romonce between o World War II pilot ond o nightclub singer.

Walter K. Deacon '42 (Alpho Tou Omega) of Yorbo Lindo, Colif., died Sept. 13, 2009. He wos the president of Deocon Associotes. Predeceosed by his wife, Pauline, he leaves two children.

Warren G. Harding '42 (Phi Sigma Koppo, Skull) af Lyman, Moine, formerly of Mantclair, N.J., died April 27, 2010. He was predeceosed by his wife, Glodys, ond o son. Two daughters survive him. Hording worked for Public Service Gos & Electric of Nework.

Dr. **Charles A. Jenkins Jr. '43** (Phi Koppo Theta) of Tucsan, Ariz., died Morch 29, 2008. A dentol officer in the U.S. Air Force for 22 yeors, he loter estoblished o privote proctice in periodontics and

endodantics. He was predeceased by his wife, Lais, and a daughter. Two children survive him.

John J. Archer '44 (Theta Chi) of Chatham, N.J., died Jan. 5, 2010. He leaves his wife, Catharine, and three children. He was a patent lawyer in private practice and later warked far several carparatians before retiring fram Squibb Inc.

Everett W. Brown '44, af Shrewsbury, Mass., died Oct. 26, 2009. His wife, Elvan (King), died in 1983. Three sans survive him. Brawn was retired fram Heald Machine Ca. as a mechanical engineer.

John G. Underhill '44 (Alpha Tau Omega) af Dallas died Feb. 3, 2010, leaving his wife, Elsie, and twa children. His former wife, Marguerite (Casey), died in 1987. He was retired fram Exxon Carp.

Franklyn R. Williams Jr. '44 af Webster, Mass., died April 16, 2010. An architect, he cantinued the practice faunded by his father and retired in 1983. He is mourned by close friends and a gadsan.

George W. Gregory '45 (Phi Sigma Kappa) af Mystic, Cann., died March 1, 2010. After graduatian he served in the Navy until 1963, then warked far Electric Baat far 17 years and cantinued cansulting after retirement. Survivars include his wife, Jean, faur sans, and a stepsan.

Richard W. Moriarty '45 af Petersham, Mass., died Sept. 20, 2008. He leaves his wife, Ellen (Gauld), and twa children. He was retired fram Littan Industries.

Albert F. Myers '45 af Shelby Tawnship, Mich., died Feb. 11, 2010. He leaves his wife, Paulyn, five children, and three stepchildren. He was predeceased by his first wife, Geargie, in 1981. Myers was the retired vice president af Lear Siegler.

Alfred W. Rothwell '45 (Theta Chi) af Woadstack, Ga., died Dec. 11, 2009. He was retired fram DuPant. He was predeceased by his wife, Thelma (Bayer), and a san. He is survived by a son.

Frank A. Gross Jr. '46 (Sigma Phi Epsilan, Skull) of Fart Warth, Texas, died Jan. 15, 2010. He was the awner af GO Recagnitian Cancepts, which he faunded with his wife, Virginia (Gunther). Other survivars include his san, Danald Grass '72, and a daughter.

David L. Hall '46 ('54 SIM) (Phi Sigma Kappa) af Worcester died Feb. 13, 2010. His wife, Muriel (Bergstam), died in 2005. Three children survive him. Hall warked far the farmer Coes Knife Ca., where he held the past af vice president of manufacturing.

Clarence A. Hodges '46 of Dewitt, Mich., died Jan. 8, 2010. He warked for C. M. Smille & Ca.

Harry J. Mehrer '46 (Theta Chi, Skull) af Lawer Gwynedd, Pa., died May 22, 2010. He warked in the family textile business, Butterwarth & Sans, and later served as a manager far the Friendly's ice cream chain. Survivars include his wife, Shirley (Hiltz), and twa children. He was predeceased by a son.

Douglas S. Miller '46 af East Narthpart, N.Y., died March 9, 2010. He was retired fram the U.S. Dept. af Energy as a pragram manager. He leaves twa children.

Robert W. Schramm '46 (Sigma Alpha Epsilon) af Venice, Fla., and Mashpee, Mass., died April 24, 2010. As directar af averseas prajects far Bristal-Myers Squibb, he oversaw constructian af pharmaceutical plants an six continents. His wife, Barbara, died Nov. 10, 2010. He is survived by three sans.

Robert S. Tamblyn '46 of Medfard, Ore., died May 11, 2010. He was predeceased by his wife, Sally, in 2009. He was the retired treasurer of JRW Tech Inc.

William A. Williams '47 (Theta Chi) af Halden, Mass., died March 4, 2010. He was the father af Bill Williams Jr. '80. He alsa leaves his wife, Laretta (Saunders), and three other children. An electrical engineer, he retired from Heald Machine Ca. with 38 years af service.

Edmund C. "Ned" Dowse Jr. '48 af Asheville, N.C., died May 11, 2009. He retired fram Eastman Kodak Ca. as an engineering supervisar. He was predeceased by his wife of 53 years, Nancy, and his second wife, Ann. He is survived by a daughter.

Edward J. Powers '48 (Phi Kappa Theta) af Sauth Windsar, Conn., died Oct. 15, 2010. He leaves his wife, Arline (Kimball), and two children. A graduate of Bastan Callege af Law, he was a contracts administratar in the legal department of United Technalogies. After retirement fram carparate emplayment he warked in his san's law office.

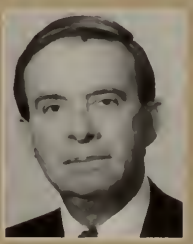
John H. Beckwith '49 ('51 MS CM) af Westerly, R.I., died Feb. 20, 2010. Predeceased by his wife, Jahanne, he is survived by six children. His career as a vice president for ExxanMabil Research and Engineering took him all aver the glabe.

Richard W. Brown '49 af Avan, Cann., died Feb. 26, 2010. He was retired fram the University of Hartfard where he taught electrical engineering for 25 years and served as department chair. He previausly taught at Narwich University and Wentwarth Institute. Husband af the late Barbara (Williams) Brawn, he leaves three children.

Trustees Remembrance

J. Morrison Smith Sr. '37, farmer president af the Natianal Radia Institute and dedicated supparter af his alma mater, died Feb. 15, 2010. Smith served as trustee fram 1972 ta 1977 and was hanared with the Herbert F. Taylar Award in 1987. With his father, James E. Smith, Class af 1906, and his nephew, Michael Galbraith '58, he made possible the canstructian of new facilities far the student radia statian, WWPI, in the Campus Center. His family also endowed three named schalarships. Smith was predeceased by his wife, Mary, and a son. Three children survive him. He belanged ta Alpha Tau Omega.

Paul R. Beswick '57, faunder of Beswick Engineering, died Aug. 15, 2010. He is survived by his wife, S.K., wha serves as the firm's aperatians manager, and his san, ChanLing, a WPI seniar. Paul and S.K. established the Paul R. Beswick Prafessarship in Innavatian and Entrepreneurship in 2008. He also served an the advisary baard for WPI's Callabarative far Entrepreneurship and Innovation (CEI). In October 2009 he was appointed to the WPI Board of Trustees.



Daniel I. Coifman '67, trustee emeritus, died Oct. 20, 2010. He was faunder of Able Internatianal and president af TRIL Expart Carp. af Puerta Rica, where he worked with his son, Tracy Caifman '93. He is alsa survived by his wife, Linda, and a daughter. After earning a master's degree in industrial engineering fram Northeastern University, Caifman managed palymer plants in the United States and Puerto Rico. A member of Alpha Epsilan Pi, he lived in the fraternity's hause an Einharn Raad. He served an the WPI Board fram 1995 ta 2003 and was a dedicated supparter in the campaign ta construct the Campus Center.

Full obituaries may be read at wpi.edu/News/Memoriam

Paul R. Dulong '49 (Phi Sigma Kappa) of Dallos, Texas, died Dec. 21, 2009. Predeceosed by his wife, Jeon, he leaves three children. He worked for severol firms os o mechonicol and electricol engineer ond retired from E-Systems with 20 years of service.

Henry J. Ezen '49 of North Fort Myers, Flo., died Dec. 25, 2009. After retiring from Poloroid Corp. in 1984, he founded Ezen Consulting Engineers with his wife, Moe (Vocco), who died in 1988, ond his daughter, Fronces, who survives him.

Robert M. Jodrey '49 (Sigmo Alpho Epsilon) of Westborough, Moss., died April 22, 2010, leoving his wife, Vero (Louis). A former engineering instructor ot the University of New Hompshire ond Dortmouth College, he later held monogement positions at several manufocturing firms.

Former Tech Old Timers president **James F. O'Regan '49** (Phi Koppo Theta, Skull) of Westborough, Mass., died Morch 20, 2010. He leoves his wife, Mory (Rogoshio), ond four children. O'Regon wos the retired president and founder of Feecon Corp., and a former member of WPI's Fire Protection Engineering Advisory Boord.

Abraham W. Siff '49 (Alpho Epsilon Pi) of Sudbury, Moss., died Aug. 30, 2009. He leoves his wife, Potricio (Skehon), ond six children. Siff wos a retired product manager for Dresser Industries.

Bernard C. Walsh '49 of Holden, Moss., died Jon. 17, 2010. He worked for Bose Corp. os o mechonicol engineer. Predeceosed by his wife, Marjorie (Bernord), he leaves six children.

D. Ray Allshouse '50 of Limerick, Po., died Morch 15, 2009. Husband of the late Ruth (Douderis), he is survived by two sons. He worked as o mechonical engineer ot severol firms ond retired from Elf-Atochem.

Raymond J. Blanchet '50 (Phi Koppo Theto) of Wollingford, Conn., died March 25, 2010. He wos retired from U.S. Steel os o plant engineer. His wife, Dorcy (Chase), predeceased him in 2008.

John L. Hawley '50 (Phi Sigmo Koppa) of Winter Pork, Flo., died Moy 5, 2010. He leaves his wife, Jeon, ond a son. He was retired as senior principol engineer for Stone & Webster, where he oversaw the completion of the Comonche Peak Nuclear Station.

Malcolm D. Horton '50 (Sigmo Phi Epsilon, Skull) of Dode City, Fla., died Sept. 28, 2009. He leoves his wife, Doris, ond three doughters. Horton joined Domes & Moore in 1952, managed the company's offices in various regions of the United Stotes, os well os the Middle Eost, ond continued as o consultont ofter retirement.

Alan F. Howe '50 of Princeton, Mass., died April 23, 2010. Survivors include his wife, Ellen (McCorthy), three children, his former wife ond friend, Noncy Howe, ond five stepchildren. He wos retired from Norton Co. ofter o coreer of almost 40 years.

Norman B. Maynard '50 (Theto Chi) of Westport, Moss., died June 3, 2010. He wos the retired president of Hothawoy-Broley Whorf Co. Survivors include his wife, Jonice (Broley), and three doughters.

Joseph C. Syiek '50 of Concord, Moss., died June 22, 2010. Predeceosed by his wife, Agnes (Johnson), he leoves five children. An electricol engineer, he was retired from the U.S. Air Force Strotegic Air Commond ot Honscom Field.

Warner S. Adams Jr. '51 of Groton, Conn., died Sept. 15, 2009. He leoves his wife, Jonet (Cochron), and a doughter. He retired os heod of the Submorine Electromagnetic Systems Dept. of the Novol Undersea Warfore Center.

Faculty Remembrance

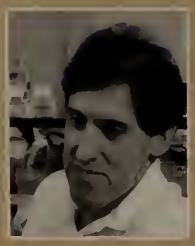
Alex Dilorio '86 (MS), '91 (PhD), director of the Bioprocess Center ond offilioted ossistont professor of biology ond biotechnology, died July 9, 2010, ofter o long illness. He leaves his wife, Corol (Gurney) Dilorio '86, and three children. A groduote of Columbia University, he eorned o master's degree ond PhD ot WPI ond joined the foculty in 1993. Under his direction, the Bioengineering Center provided contract reseorch to the biotechnology industry ond ployed o centrol role in workforce retraining progroms offered by WPI's Corporote ond Professionol Educotion Division. Working with a California compony colled EdiniQ, Dilorio developed new processes for producing the biofuel ethonol from ogriculturol woste to lessen the need to use corn ond other foods to creote fuel.

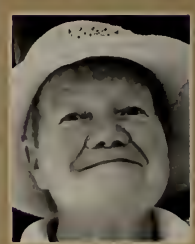
Raymond R. Hagglund '56, professor emeritus of mechonical engineering, died on Nov. 29, 2010. An internotionolly recognized expert on engineering ond product liability low, he consulted on more thon 1,500 coses, lectured internotionolly, ond inspired his students with mock triols. He received the 1974 Board of Trustees' Aword for Outstonding Teoching. Hogglund ployed o honds-on role in development of the WPI Plon, rollying students ond colleogues to refurbish a disused spoce in the Woshburn Shops to serve os o home for the IQP. His generous support of WPI is morked by the Compus Center Hagglund Room. Preceded in deoth by his wife, Joyce, he leaves two daughters. He wos o member of Phi Sigmo Koppa and Skull.

Owen W. Kennedy Jr. '45, a longtime electricol engineering professor ond WPI's first deon of ocodemic computing, died Moy 10, 2010. After earning his bochelor's ond moster's degrees ot WPI, he joined the electricol engineering foculty in 1948 and taught for 40 years. Kennedy wos instrumental in bringing the first standard desktop computer to the campus. He wos on eorly member of o discussion group of young foculty who loid the foundotion for the WPI Plon. Predeceosed by his wife, Noncy (Inmon) Kennedy, he morried Floro (Hokolo) Adoms in 1994. Other survivors include two children ond three stepchildren. He wos o member of Phi Sigmo Koppo ond Skull.

Audrey L. Muggleton-Harris, o former ossociote professor of biology ond biotechnology who made notoble contributions os a cell biologist ond embryologist, died Sept. 2, 2010. She joined the WPI foculty in 1976 ond heoded up some of the world's first ottempts to clone o mouse. She wos the first womon to win the Boord of Trustees' Aword for Outstonding Creative Scholorship ond Reseorch. Muggleton-Horris left WPI in 1983 ond joined the Medicol Reseorch Council in London, where her work centered on diognosing defects in embryos before in vitro fertilization implontotion. She is survived by a doughter ond two grondchildren.

Full obituaries may be read at wpi.edu/News/Memoriam





Gerald F. Atkinson '51 (Phi Kappa Theta, Skull), a langtime resident af West Springfield, Mass., died April 9, 2010. He was retired fram Pratt & Whitney as an electrical engineer.

Jin Wah Lee '51 af Pembrake Pines, Fla., died Jan. 15, 2010. He leaves his wife, Kin Lee, and a daughter.

Roger W. Swanson '51 (Alpha Tau Omega) af DeWitt, N.Y., died May 23, 2010. He was retired fram General Electric, where he warked an military radar projects. He is survived by his wife, Marilyn, and three children.

Donald M. Krauss '52 (Sigma Alpha Epsilan) af Sun City West, Ariz., died Aug. 14, 2010. He was retired fram Raythean Ca. as a pragram manager. Predeceased by his wife, Edna (Skytne), in 2002, he leaves his daughter, Lisa Krauss '80, and twa ather children.

Edgar W. Slocum '52 (Phi Sigma Kappa) af Wilmingtan, Del., died June 28, 2010. He warked at DuPant Experimental Statian far faur decades. He is survived by twa children, his girlfriend, Ina Casale, and his ex-wife, Jean Slacum.

Robert T. Baxter '53 (SIM) af Scituate, Mass., died Jan. 11, 2010. He leaves his wife, Eleanar, and faur children. He was retired fram Baxter Enterprises.

Henry K. Burger '53 af Williamsburg, Va., died April 8, 2010. He retired from a naval career in 1977, with the rank af cammander, then held several civilian jabs in public warks, haspital aperatians, and hotel services. He leaves his wife, Gail (McSherry), and three children.

Philip J. Kaminsky '53 (Alpha Epsilan Pi, Skull) af Marblehead, Mass., died March 19, 2009. He leaves his wife, Harriet (Budnitz), and three children. He warked far Cahmad Securities Carp.

David A. Bisson '54 (Phi Kappa Theta) af Shareline, Wash., died May 14, 2010. Survivars include his wife, Caral, and three children. He was the retired president and CEO of Frederick Beck Originals.

Wilfred F. Taylor '54 (Alpha Tau Omega) of Lyman, Maine, died June 5, 2010, leaving his wife, Mary (Scatt), and six children. A civil engineer, he started TEC Engineering and served as the tawn engineer far Barnstable, Mass., and Garham, Maine.

Roy H. Wise '54 (Sigma Phi Epsilan) af Succasunna, N.J., died Nav. 5, 2009. Predeceased by his wife, Evelyn (Ihde), he leaves twa daughters and a stepdaughter. He retired fram a lang career with Nynex.

John J. Bryce '55 af Lancaster, Mass., died April 11, 2010. He was retired fram Harvey & Tracy Assac., where he warked as a structural engineer far mare than 30 years. Survivars include his wife, Ann (Sargent), and twa children.

Richard E. Goodwin '55 (Phi Gamma Delta) af The Villages, Fla., died Nav. 19, 2009. He leaves his wife, Marjarie, and twa children. He was vice president af marketing far Industrial Engineering Inc.

Philip M. Leavitt '55 (Phi Kappa Theta) af Oak Ridge, N.J., died June 29, 2009. He was retired fram Picatinny Arsenal as a nuclear arms engineer. He alsa faunded and ran the Old Pine Shap. He leaves his wife, Sally (Hewitt), and faur children.

Warner I. Clifford '57 (Phi Sigma Kappa) af Kingstan, Tenn., died March 18, 2009. A member of the baard af Stane & Webster Engineering, he was retired as seniar vice president. His wife, Bernice (Huffman), and a daughter survive him.

James M. Duff '57 (Theta Chi) af Palisades Park, N.J., died Nav. 7, 2010, leaving his wife, Lynn. He received his MBA fram Fairleigh Dickinsan University and spent his career warking at Lever Brathers (naw Univlever Hame and Persanal Care).

George Klimchak '57 (Sigma Alpha Epsilan) af Daytana Beach, Fla., died June 4, 2009. He warked as a financial advisar far aver 40 years. He leaves four children.

William H. Ostermann '57 (Sigma Phi Epsilan) af Baathbay Harbar, Maine, died Aug. 12, 2009. He leaves his wife, Carol (Waterfield), and twa sans. He warked at Pratt & Whitney as a camputer pragrammer. After retirement he served as a park ranger in Death Valley and Acadia natianal parks.

Collins M. Pomeroy '57 of Orleans, Mass., died April 24, 2010. He is survived by his wife, Barbara (Marris), and twa sans. He was retired fram Verizan Cammunicatians after a 33-year career.

Donald G. Striby '57 (Phi Gamma Delta, Skull), af Cacaa, Fla., died Aug. 3, 2009. He was retired fram Lackheed Martin. He leaves his wife, Ruth, three sans, and a stepdaughter.

Robert A. Yates '57 ('59 MS) (Theta Chi) af Bethany, Cann., died Sept 24, 2010. He worked far Unirayal, retiring as energy/conservation manager. He is survived by his wife, Susan (Reeder), and a daughter.

David A. Ryan '58 (Phi Kappa Theta) af Winter Park, Fla., died Oct. 6, 2010. He warked far Raythean and Lackheed Martin. He leaves his wife, Danna (Kinney), and seven children. He was predeceased by his first wife, Nancy (Bullack), and a daughter.

George F. Walker '58 (SIM), farmer president af Jahnsan Steel and Wire in Warcester, died May 7, 2010, at age 83. He leaves his wife, Gladys (Canstantine), and twa daughters. He faunded Delta Wire Carp. in Clarksdale, Miss.

John A. Beede '59 af Shrewsbury, Mass., died May 30, 2010. An independent cantractar, he served as a saftware and systems analyst far several area campanies, including GTE and Raythean. He is survived by twa daughters.

Leon H. Blanchard '59 (SIM) af Dade City, Fla., died June 12, 2009, leaving his wife, Elizabeth (Field), and faur children. He retired fram Margan Canstructian Ca.

Neil A. Peters '59 (Tau Kappa Epsilan) af Phaenix, Ariz., died May 24, 2010. He warked far the Rachester Praducts Divisian af General Matars and later in the aviatian and aeraspace industry. He is survived by three children.

Paul E. Honer '60 (Phi Sigma Kappa) af Pensacala, Fla., died May 17, 2008. He leaves his wife, Ruthann, and two children. He was marketing and sales manager far Kennedy Engineering Ca.

John Brunter '61 (farmerly Brylczyk) (Alpha Tau Omega) af Glen Cave, N.Y., died Feb. 12, 2010. He was retired fram Grumman Aeraspace as a seniar engineer in the Avianic Design Sectian. He leaves his wife, Jean (Backstram), and twa children.

Alfred A. Arterton '62 (SIM) af Westerly, R.I., died July 21, 2009. He leaves his wife, Jean (Merriam), and faur children. He warked far several manufacturing campanies and retired fram Cramptan & Knawles Carp. in 1991.

Thomas W. Conway '62 (Phi Kappa Theta) af Hutchinsan, Kan., died Jan. 8, 2009, after a caurageaus battle with lung cancer. A farmer partner in Canway & Assac., he later warked as an agent far New Yark Life Insurance Ca. He was predeceased by his wife, Jeanne, and a san. One san survives him.

Robert H. Goretti '62 (Sigma Alpha Epsilan) of Plainville, Mass., died Nav. 1, 2009. Predeceased by his wife, Nareen, and a san, he is survived by a daughter. He warked far Texas Instruments and later was an aperatians manager and sales executive in the jewelry industry.

Earl M. Maby '62 (MNS), farmerly af Mansan, Mass., died Nav. 24, 2009, at age 86. He taught mathematics at Lee High Schaal far mare than 30 years. Survivars include his twa daughters. He was predeceased by Bertha Wilcax, his laving campanian far mare than 30 years.

Edward M. Jablonski '64 (SIM) af Clinton, Mass., died April 14, 2010. He was an industrial engineer far Ray-O-Vac Co. far more than 40 years. His wife, Lucille (Renaud), predeceased him. Three children survive him.

Edward R. Mencow '64 of Lexingtan, Mass., died May 18, 2010. He cantributed ta the develapment af laser technalagy at Raythean Ca., and later worked for Bell Labs and MIT Lincaln Labaratary.

David B. Getchell '65 af Rackwall, Texas, died Sept. 20, 2009, leaving his wife, Nancy, and twa children. He was president and awner af Tyler 5th Avenue Calar Labs.

William P. Stanton '68 ('72 MSCE) (Sigma Phi Epsilan) af Galden, Cala., died April 22, 2010. He leaves his wife, Barbara (Schilling), and two sons. He worked far several engineering and surveying firms, and the Colorado Water Conservatian Baard.

Former football co-captain **Mark S. Simpson '69** (Phi Kappa Theta) af Germanville, Pa., died May 1, 2010. He was retired fram Air Praducts & Chemicals Inc. Survivars include his wife, Jaanne (McNeer), and twa children.

Leonard A. Chauvin '70 (MNS) af Webster, Mass., died April 4, 2010, at age 86. He taught chemistry and health science at Bartlett High Schaal and retired as chairman af the science department.

Steve R. Dacri '74 (Tau Kappa Epsilon), of Las Vegas, died Feb. 11, 2011, of colon cancer. He leaves his wife, Jan, and a son. From his first magic acts at age six, to his career as a popular Las Vegas illusionist, Steve dedicated his life to performing, teaching, and writing about magic. He impressed WPI deans with his talent during his admission interview, and later credited WPI with giving him the business and marketing background to pursue a career in entertainment. A pioneer in close-up, sleight-of-hand magic, he often returned to the Worcester area to perform and connect with old friends. His act was a popular attraction at WPI Reunions.

Ralph E. Southwick '66 (MNS) af Barre, Mass., died Nav. 20, 2009. He was 87. Predeceased by his wife, Phyllis (Caak), he leaves eight children. He was a retired middle schaal science teacher wha taught in the Halden schaal system.

Walter A. Johnson Jr. '67 ('69 MS ME) af Hamasassa, Fla., died Jan. 22, 2011, leaving his wife, Lynda (Kennedy). He began his career as a pragrammer far IBM and retired fram the cast engineering department af Lackheed Martin Federal Systems.

Allan T. Buros '67 of Amherst, N.H., died June 17, 2010. He was retired fram BAE systems as a reliability engineer with 33 years af service. He leaves his wife, Nadine, and three children.

J. Roger Daugherty '67 (Sigma Phi Epsilon) of Los Angeles died Aug. 11, 2009. He was president and faunder af Claviger Carp.

Bruce S. Robinson '70 (Phi Sigma Kappa) of Jacksanville Beach, Fla., died Oct. 7, 2010. He received an MBA fram Fairleigh Dickinsan University and campleted the management development pragram at Harvard University Schaal af Business. He warked far AT&T in New Jersey and Flarida. He leaves his wife, Sally, and twa sans.

William S. Cundall Jr. '71 (SIM) af Spencer, Mass., died May 11, 2010. He was 81. He leaves his wife, Helen (Bawmar), and faur children. He was a retired fareman far Jamesbury Carp.

Daniel T. Donahue '71 af Waburn, Mass., died Dec. 1, 2009. He was an engineer far Caughlin Enviranmental and previously served as town engineer far several Massachusetts municipalities.

James R. Fay '71 (Tau Kappa Epsilan) af Marlboraugh, Mass., died March 5, 2010. He leaves his wife, Judy (Wight), and twa daughters. A graduate af the ROTC pragram at WPI, he was retired fram the Air Farce as a structural engineer.

Bryan L. Furtek '71 af Salt Lake City died Feb. 7, 2010. He was president af Bryan L. Furtek Cansulting, an enviranmental engineering firm specializing in water and soil remediatian.

Gordon F. Chess '72 (PhD EE) af Landan, Ontaria, Canada, died Oct. 9, 2009, at the age of 84. He was the retired dean af engineering at the University af Western Ontaria. He leaves his wife, Margaret, and three children. He was predeceased by a daughter.

James R. Hargraves Jr. '72 af Bethel, Cann., died March 23, 2010. He was the faunder af PDS. He is survived by his wife, Patricia (Goettel), and faur children.

Roger T. James '73 (MS MA) af Sterling, Va., died April 17, 2010. He retired from Science Applicatians International Carp. as a seniar analyst. Survivars include his wife, Mary Ellen, and twa children.

Ralph E. Bednarik '74 (SIM) af West Yarmouth, Mass., died Aug. 16, 2009, at age 82. He leaves his wife, Sandra (Paale), twa children, and twa stepchildren. A langtime engineer far Wyman-Gardan Ca., he retired as manager af the campany's Graftan plant.

Richard Pomeroy '75 af Actan, Mass., died June 30, 3009. He warked far General Electric.

Earle R. "Russ" Vickery III '75, of Hendersanville, Nev., died Jan. 5, 2009, leaving his wife, Margaret. He was the san af the late Earle R. Vickery '38. He was self-emplayed as awner af Vickery Design.

John F. Del Prete '76 (SIM) af Naples, Fla., died July 16, 2009, at age 82. He was retired fram Cammanwealth Energy as directar af public relatians, and fram the Army National Guard as chief warrant afficer. His wife, Vera (Buchner), and six children survive him.

Dave "The Bear" Pryor '76 (Lambda Chi), af Salem, Ill., wha played faur seasans an the faatball team, died June 14, 2010. He leaves his wife, Susan, and three children. He was president and CEO af Radiac Abrasives. WPI classmates held a pre-game remembrance far his family at Hamecoming.

Joseph P. Murphy '77 (SIM) af Rutland, Mass., died March 19, 2010. He was the husband of Jaan (Budnick) Murphy, assistant to the dean af graduate enrollment at WPI. He alsa leaves faur children. Murphy was the retired plant manager far Jamesbury Carp.

Joseph B. Dellagala '79 (SIM) af Shrewsbury, Mass., died March 2, 2010, at age 88. His wife, Esther, survives him. He was predeceased by his twa sans. Dellagala was retired fram Wright Line Corp. as a manager.

Raymond J. Weavill '79 of Harrisburg, Pa., died Jan. 4, 2010. He leaves his wife, Joyce, two children, and three stepchildren. He monaged AMP/Tyco Electronics' Lickdole Plant.

Gordon C. Estabrooks '80 (MNS) of Chelmsford, Moss., died April 15, 2010, at oge 83. He was heod of the Science Department ot Boston Lotin High School for more thon 25 years. His wife, Alice (McEwen), survives him.

Francis V. Wenc '80 (SIM) of The Villoges, Flo., died Aug. 30, 2008, at age 66. He wos in charge of beveroge systems maintenonce for Woyne Densch Inc. His wife, Sheilo, survives him.

Laurent L. Bourbeau '82 (SIM) of Sturbridge, Moss., died Moy 17, 2010, ot 72. Survivors include his wife, Corol (Monette), ond four children. He was retired from Hyde Tools os director of heolth ond sofety.

Richard R. Terry '82 (MNS) of Marlborough, Mass., died Feb. 9, 2010. He was 74. Predeceosed by his wife, Rito (Moiorono), he leoves three children. He retired from Marlborough High School os heod of the Science Deportment ofter olmost four decodes of teaching.

Francis R. Halas '84 (MNS) of Lynnfield, Moss., died Jon. 23, 2009, at oge 66. He wos o retired teacher at Malden Cotholic High School. His wife, Eleonor (Goc), survives him.

Geoffrey C. Sluicer '85 of Brookline, Moss., died unexpectedly on March 6, 2010. He wos o softwore engineer for severol high-tech firms in the Boston oreo, including Timely Solutions. He is survived by o brother.

Martin J. Moran '88 of White Ploins, Md., died Moy 22, 2009. An outhority on nucleor submarine weoponry, he served ot novol shipyords in Norfolk, Vo., Newport, R.I., and Portsmouth, Vo. He is survived by his wife, Donno (Johnson), ond two stepsons.

Daniel E. Bruso '89 of Somers, Conn., died Feb. 14, 2010. He leoves his wife, Sondro (Strumski), ond three children. An ossociote in the intellectuol property litigotion proctice of Contor Colburn LLP, he was also odjunct professor ot Western New England College of Low.

David A. DiBattista '90 (Alpha Chi Rho) of Enfield, Conn., died Jon. 10, 2010. He leaves his wife, Kathleen (White), and two children. He wos o soles engineer for Stondard Bellows Co.

James R. Perron '90 of North Scituote, R.I., died April 27, 2009. A Navy veteran of Operotion Desert Storm, he wos employed by the U.S. Postal Service. His wife, Anito (Lomb), survives him.

Staff Remembrance

John Lott Brown '46, o longtime trustee who served as interim president from 1994 to 1995, died Jon. 16, 2011. His ocodemic career included positions at the universities of Kansos, Pennsylvonio, ond Rochester, and a decode ot the helm of the University of South Florido, where he oversaw the transformotion of the school from o smoll liberal arts institution to a major reseorch university. Brown received the Robert H. Goddard Alumni Aword for Professionol Achievement in 1969, on honorory doctorote in science in 1984, the William R. Grogan Award for Support of the Mission of WPI in 1996, ond the Herbert F. Toylor Alumni Award for Distinguished Service in 2006. During his year as interim president, he was tapped for Skull. He is survived by his wife, Cotherine, ond four children.

James F. Fee '65, co-founder of the WPI Venture Forum, died Oct. 4, 2010, leoving his wife, Joon, ond two children. He belonged to Phi Koppo Theto ond served on his Closs Boord of Directors. A consultont to entrepreneurs, Fee worked with olumni and faculty to creote the Venture Forum, o unique orgonization devoted to bringing together entrepreneurs, investors, business leaders, and job seekers. Under his leadership, it grew to a self-supporting nonprofit with several hundred members, offering monthly progroms.

Full obituaries may be read at wpi.edu/News/Memoriam

Bruce E. Anderson '91 (SIM) of Lunenburg, Mass., died July 20, 2010. He was 68. Survivors include his wife, Marian (Kroft), ond three children. He wos retired from Norton Co.

Lawrence C. Fox '97 (MBA) of Dartmouth, Moss., died Nov. 2, 2010. He was 49. He wos vice president of soles for DM Technology & Energy. He leoves his wife, Laura, and three children.

Jared B. Berube '98 of Tolland, Conn., died unexpectedly on Morch 15, 2010. He leaves his wife, Dianna (Corlson) Berube '98, and two children. He earned on MBA ot Nichols College ond worked as o cell manager for United Abrosives Inc.

Rhonda J. (Lima) Goonan '98 (MME) of Roynhom, Moss., died June 18, 2009, ot age 39. She leoves her husbond, Robert, ond three children. She taught moth ot Shoron High School.

Michael W. Hamel '99 of Nougotuck, Conn., died unexpectedly on April 9, 2010. He worked in the IT department of the state's Region 15 Boord of Educotion. He is survived by his parents ond o sister.

Alexander A. Naiman '05 of Foxboro, Moss., died Nov. 24, 2009. He groduoted from Dortmouth College in 2007 with master's degrees in biostotistics and epidemiology studies, ond was working on his doctorote in genetics ond laboratory science in cancer research ond reseorching the use of bacterio ond viruses os o vehicle to penetrote ond kill cancer cells. He is survived by his porents.

WPI has also received notice of the following deaths:

William S. Hoar '22 in 1990
Richard F. Norton '26 in 2002
Henry I. Hirschen '30 in 1990
William J. (Grabowski) Graye '42 in 1990
Robert W. Pease '42 in 2004
Alojzy A. Moroz '44 in 2004
George F. Langley '54 (SIM) in 2006
Marion T. Harris '60 in 2005
Philip Bitzas '75 in 2007
Lawrence H. Cope '90 in 2004

Postscript

Two veterans who lost their lives in service received special commemoration last year.

• Lt. Col. Howard D. (David) Stephenson '60 was laid to rest in Arlington Cemetery more than 38 years after he was listed as missing in action during the Vietnam War. A military funeral was in June 2010, after the recovery and identification of remains of all 14 airmen aboard an AC130A gunship that was shot down near the border of Laos in 1972.

• The 1st Lt. Ryan Patrick Jones Bridge on Route 2 in Westminster, Mass., was dedicated in September 2010 in honor of the 2005 graduate who was killed in action in Iraq in 2007.

 By Joan Killough-Miller

There's a New Kid in Town

It all began with the kidnapping of a live goat from a nearby farm in 1891. The unfortunate animal was stabled at a farmhouse on Park Avenue, and its care fell to a Japanese student, Gompei Kuwada (because of his ability to handle the beast and because his were the only initials that fit the title "Goat Keeper"). When the school year ended, the students balked at the cost of boarding a live goat for the summer. Instead, they kept only the head of their mascot, mounted on a board.

When their cherished relic was stolen by sophomores the following year, the Class of 1893 tried to cover up the humiliating loss by having a look-alike goat beheaded and mounted. Imagine their shock when, 20 years later, as they sat enjoying their Reunion Banquet in the Electrical Engineering Laboratory (now Atwater Kent), they looked up to see their original goat's head being lowered from the ceiling by a crane. Their tormentors had kept it hidden in Canada and took great joy in dangling the prize in the faces of its rightful owners.

In 1926 the rank and tattered specimen was deemed too far gone to preserve. Its creators commissioned a bronze sculpture—said to weigh "twenty and a Kuwada" pounds—to replace it. They presented the trophy to the Class of 1928 at its sophomore banquet, along with rules for a class rivalry that would engender spirit—and controversy—for decades to come.

Although the rules have evolved over time, the game remains essentially the same: the Goat is awarded to the class that accumulates the most points in a series of class rivalry events. Its possessors are required to "show" the trophy publicly at large gatherings—giving rival classes a chance to snatch it. The competition has gone through periods of dormancy and revival, and has at times been constrained by an administration concerned for student safety in the rough-and-tumble rivalry.

In 1995 the Alumni Association arranged to have a replica created, so the valuable original could be preserved in safe storage. But as the new and the old Goat statues were being carried into Higgins House for a photo shoot, they were snatched from the arms of an unwary Alumni Office staffer. By sundown the original statue was returned to the proper authorities—with a '96 etched on its derriere.

We now have a new Proud Goat statue that looks out across the Quad from its temporary post by the Bartlett Center. A senior gift from the Class of 2009, this life-size rendering of the beloved mascot was created with generous support from the larger WPI community and a matching gift from Trustee Emeritus Win Priem '59. While the earlier trophy remains in play, this noble Goat will stand guard over WPI's new Sports and Recreation Center upon its completion.

Possessors of the goat mascot are required to "show" the trophy publicly at large gatherings—giving rival classes a chance to snatch it.

WPI's moscot hos token mony forms, from bronze trophy to the costumed moscot who leads cheers ot sports events.

The "Praud Gaat" statue, temparariy installed at the Bartlett Center, is a 600-paund bronze sculpture by Robert Shure. It was a seniar gift from the Class of 2009.

WPI

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What is the *next great problem* that will be solved?

It may be the world's critical need for clean water, a problem currently being examined by Jeanine Plummer, the Alena and David Schwaber '65 Professor of Environmental Engineering, and her students. Plummer helped Karalee Conover '11, Carrie Ellsworth '11, and Victoria Mason '11 pursue their Major Qualifying Project in Ghana. The students assisted Karen Kosinski '02 with her doctoral research on *Schistosoma haematobium*—a parasite second only to malaria in its devastating impact on millions of people throughout the world. They built a filtration system and developed an education program to help prevent *Schistosoma* infections.

Your direct investment advances WPI's academic program, fuels the entrepreneurship of our students and faculty, and supports their pursuit of solutions to problems of global importance. Given the remarkable record of WPI alumni and faculty, more than one of their innovations will go on to have a profound impact on the world.

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